NOVEMBER 2, 1946

Railway Age

Founded in 1856

Here's why BYERS WROUGHT IRON

resists corrosion

Want to know the secret *why* Byers Wrought Iron resists corrosion . . . *why* designers use it in the "hot spots" where ordinary materials fail too soon . . . *why* it has helped to stave off repairs and maintenance in hundreds of punishing applications?

You'll find the main answer in the photomicrograph, that shows how a minute piece of wrought iron, not much larger than a grain of sand, looks when it is magnified 100 times. Tiny fibers of "iron glass" (silicate slag) are threaded through the body of high-purity iron. As many as 250,000 of these threads are present in each square inch of section, making up from 1 to 3% by weight of the material.

When corrosion strikes, the fibers serve as a mechanical barrier, to halt and diffuse attack. This discourages the pitting and rapid penetration that are generally the cause of premature failures in ordinary materials. The fibers also help to anchor the initial protective scale, which shields the under-lying metal just as a scab protects a wound.

Authorities are agreed that the primary reasons for the unusual corrosion resistance of wrought iron is the combination of high-purity base metal, and glass-like silicate slag. No other metal duplicates the nature and composition of wrought iron . . . *and so no other metal duplicates the resulting service qualities.*

Every engineer recognizes that the uncertainty of future costs and conditions makes it more important than ever to design for maximum durability. Our Engineering Service Department will be glad to help you apply wrought iron in the places where it can serve longer for less. You will find full dimensional information in our General Catalog, sent on request.

A. M. Byers Co., Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Atlanta, Chicago, St. Louis, Houston, Seattle, San Francisco.

BYERS

GENUINE WROUGHT IRON

TUBULAR AND HOT ROLLED PRODUCTS

ELECTRIC FURNACE ALLOY STEELS · OPEN HEARTH ALLOY STEELS

CARBON STEEL TUBULAR PRODUCTS

CORROSION COSTS YOU MORE THAN WROUGHT IRON

TF1
.R2

A "BIG THREE" THAT GUARDS WHEEL QUALITY

Three key types of technical men carry out the code of the Association of Manufacturers of Chilled Car Wheels. They work as a team. They are (1) the Association's Resident Inspectors, (2) its General Inspectors and (3) its head Inspection department and Metallurgical and Engineering force.

Each Resident Inspector is permanently on location at the plant of a single member manufacturer — inspecting wheel surfaces, reviewing casting records, selecting and testing. To keep work coordinated, visits are paid periodically to all Resident Inspectors by General Inspectors traveling from Chicago. The picture is rounded out when test reports are given double checks in Chicago where the Metallurgical and Engineering staff works hand in hand with the Supervisory Inspection force, performing additional tests when necessary.

To this experience-proved procedure is added a never-ending search for new ways to make sure that all AMCCW members can say "every wheel shipped is as good as the best".

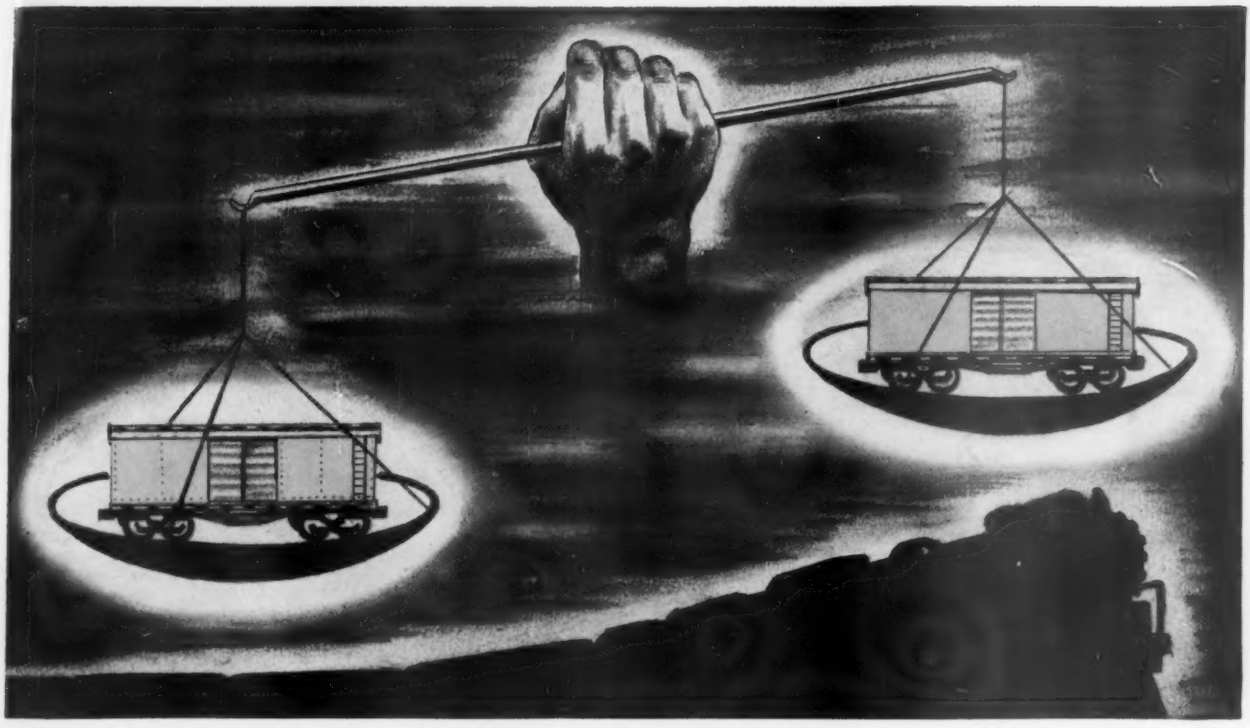
AMCCW

ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

230 PARK AVENUE, NEW YORK 17, N. Y. • 332 NORTH SACRAMENTO BOULEVARD, CHICAGO 12, ILL.

Organized to Achieve: Uniform Specifications — Uniform Inspection — Uniform Product

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 50 cents each. Vol. 121, No. 18.



Inland Hi-Steel

Reduces Dead Weight Tons . . . Adds Tons of Pay Load

Plan your designs to utilize the multiple advantages of Inland Hi-Steel. With Hi-Steel, you can make it lighter with steel . . . save weight and at the same time get the economy and strength of steel.

This Inland-developed, low alloy, high tensile steel offers properties which permit from 3½ to 5 dead weight tons to be cut from standard box or hopper cars without sacrificing strength or safety. It has a yield strength nearly twice that of ordinary Structural Steel . . . a fatigue strength approximately ⅓ greater than structural grade carbon steel . . . four to six times the resistance to corrosion . . . high abrasion resistance. Even greater yield strength and tensile strength can be obtained with this steel by a simple heat treatment.

Hi-Steel offers extraordinary workability for a high tensile steel . . . can, in fact, be welded as well or better and worked as readily as ordinary structural carbon steels.

Railroad equipment manufacturers are finding that the slightly higher cost of Inland Hi-Steel is offset by the saving in weight alone . . . that its other advantages such as ease of fabrication and great corrosion resistance make it the most economical steel for the job. Nearly all forms of steel rolled by Inland are available in Hi-Steel, including Hot and Cold Rolled Sheets and Strip, Structural Sections, Plates, Bars and Bar Shapes.

Inland engineers and metallurgists will be glad to show you how others have profited by the use of Hi-Steel . . . show you how to best adapt it to your requirements. Write for booklet on Inland Hi-Steel.

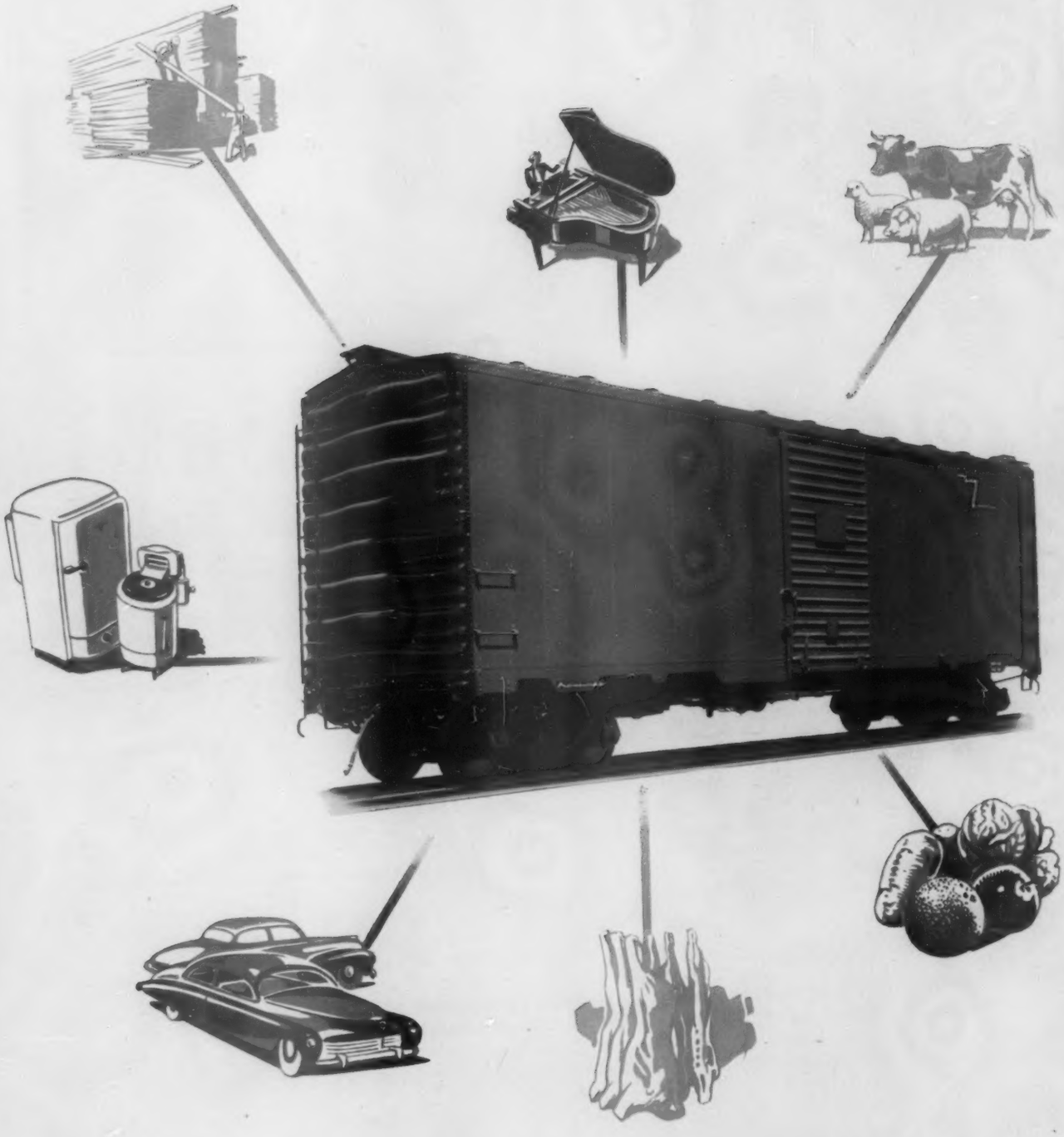
There is no traffic revenue from dead weight tons, so why carry them when Inland Hi-Steel can turn them into pay load tons.

★ Inland Steel Company, 38 South Dearborn Street, Chicago 3, Illinois. Sales Offices: Cincinnati, Detroit, Indianapolis, Kansas City, Milwaukee, New York, St. Louis, St. Paul.

PRINCIPAL PRODUCTS: BARS • STRUCTURALS • PLATES • SHEETS • STRIP • TIN PLATE • FLOOR PLATE • PILING • REINFORCING BARS • RAILS • TRACK ACCESSORIES

INLAND STEEL COMPANY

"HOUSE CARS" CA



3

947
8

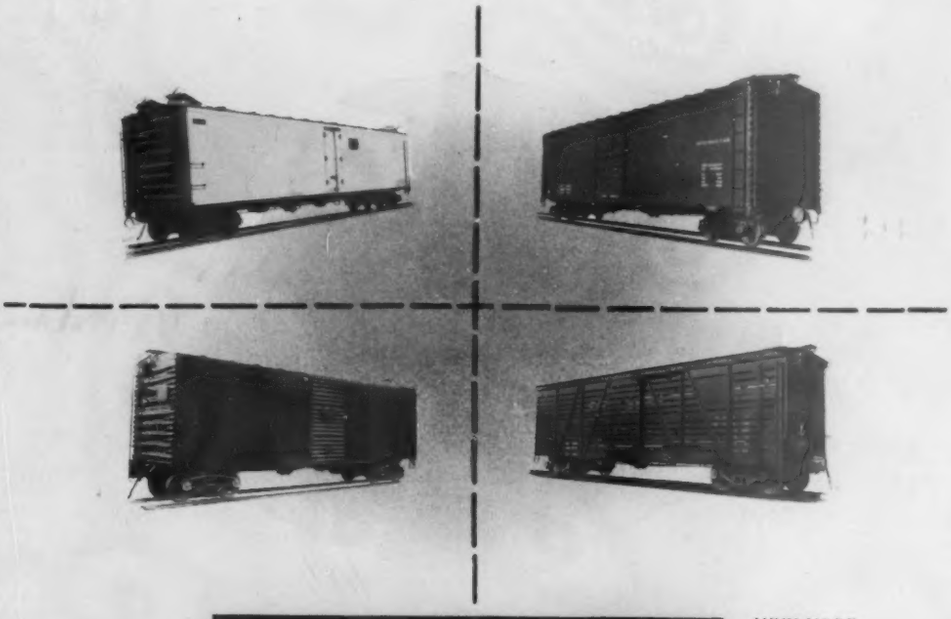
"CARRY Almost EVERYTHING!

25

The most useful freight carrier on the rails is the "house" car. You'll recognize its many "body styles" for moving furniture, food, automobiles, cattle, building materials and general merchandise . . . all with equal efficiency.

For over a century **a.c.f.** has been the leader in developing new ideas in railroad rolling stock . . . to make them more useful, safer for ladings, and more productive in building revenue. New ideas are constantly evolving.

a.c.f. CAR BUILDERS TO AMERICA'S RAILROADS



American Car and Foundry Co.

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WHEELS "sweat it out" IN THIS TORTURE CHAMBER

This wheel-testing machine is one of the reasons why ARMCO Multiple-Wear Wheels are always abreast of the changing requirements of punishing railroad service.

Developed by Armco Research Engineers, it was the first machine to duplicate service conditions in the laboratory. Here research men "run" wheels at speeds well over 100 m.p.h. They brake them severely, make them red hot, sometimes even deliberately crack them up. In a few minutes they produce thermal cracks and shelling that once would have required years of testing in actual service.

WHAT THIS MEANS TO YOU

Tests like these do two important things. They help determine quickly the best chemical analysis and processing methods needed for ARMCO Multiple-Wear Wheels in various service conditions. They assure safe, long-lasting wheels for your roads.

Get all the facts on Multiple-Wear and other ARMCO Wrought Steel Wheels. Call our nearest district office, or write The American Rolling Mill Co., 4781 Curtis St., Middletown, O.

ARMCO

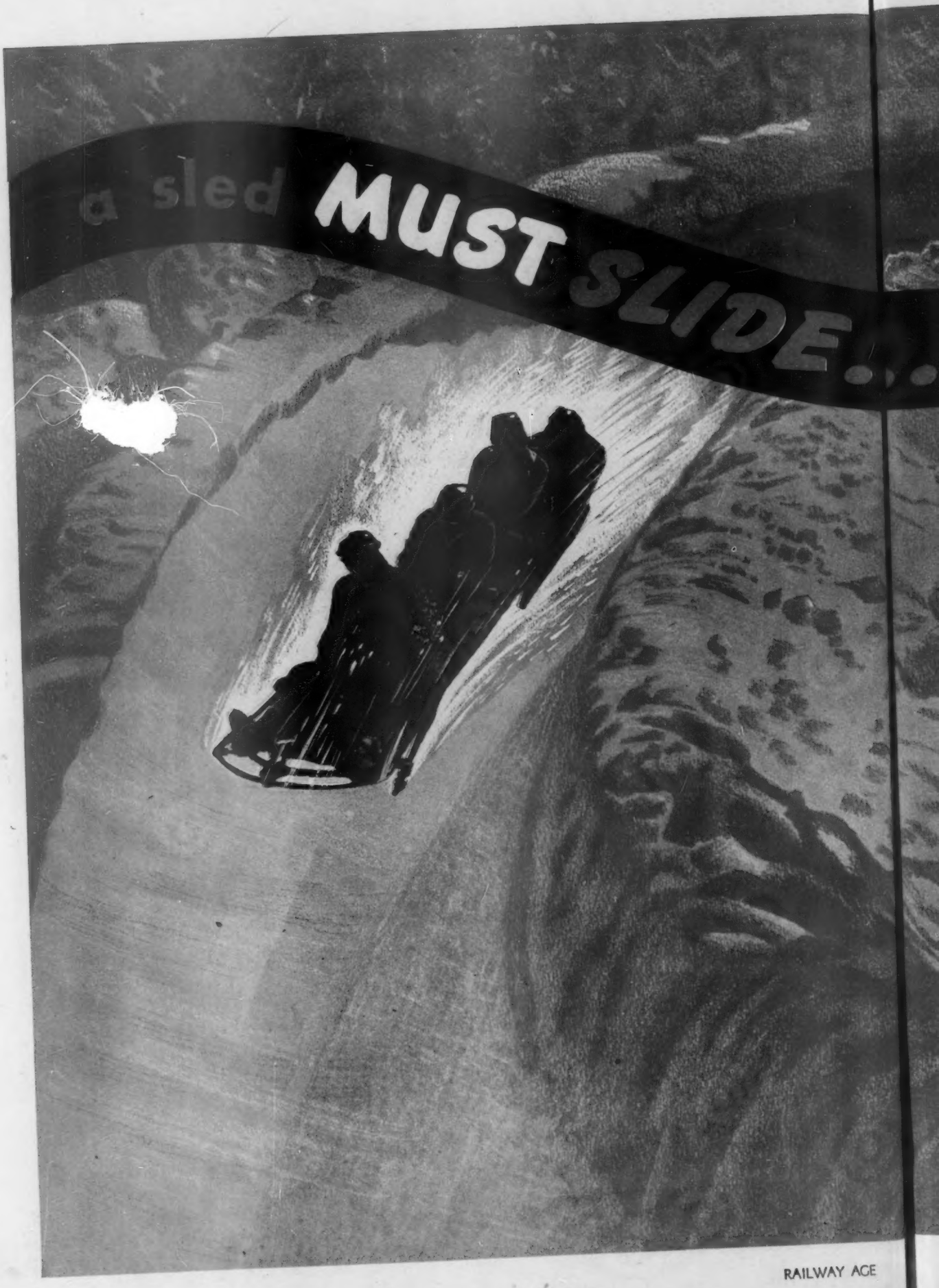
THE AMERICAN ROLLING MILL COMPANY

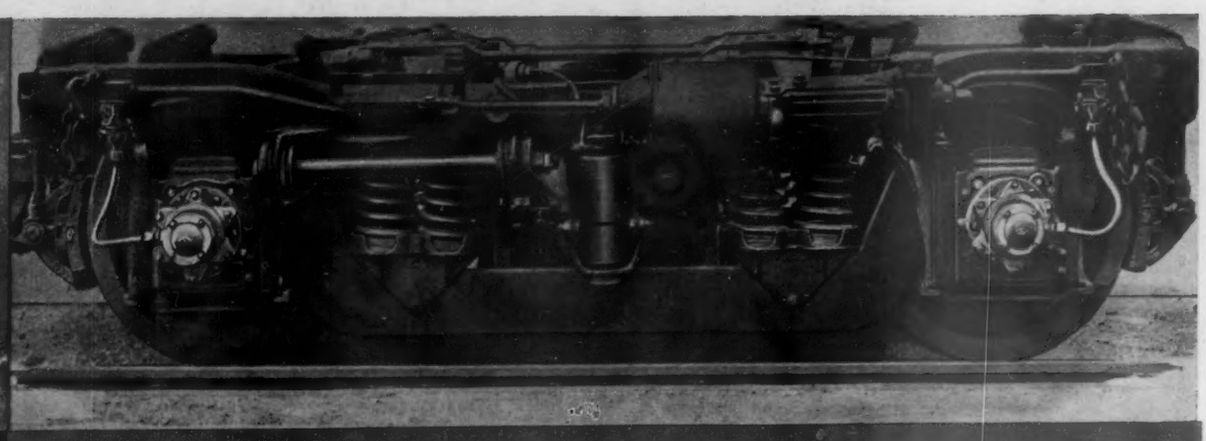
Join the Parade

Forged from quality carbon steel, oil quenched at the correct temperature, our hangers are uniform both in strength and in resistance to wear. We are equipped to meet your varied hanger requirements. Specify Schaefer.

Schaefer

SCHAEFER EQUIPMENT COMPANY • • • KOPPERS BLDG. PITTSBURGH, PA.


a sled MUST SLIDE...



but a wheel MUST NOT

Prevent slid flat car wheels with the AMERICAN BRAKE SHOE CONTROLLER

A sled is *supposed* to slide, but a car wheel *is not.* A sliding wheel means costly railroad operation, loss of car availability and loss of passenger goodwill.

Prevent these losses with the speedy, electrically-operated American Brake Shoe Controller. This is a simple, positive-acting device in wide and successful use on high speed passenger trains.

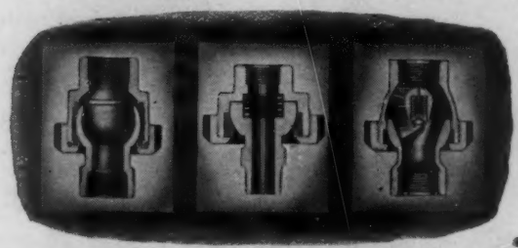
The American Brake Shoe Controller can be tested while the train is moving or standing. Control starts the instant slipping begins, so that the controlled wheels never reach the stage of sliding. Full brake is restored the moment that slip is eliminated. The American Brake Shoe Company, 230 Park Avenue, New York 17, N. Y.

AMERICAN Brake Shoe COMPANY

BRAKE SHOE AND CASTINGS DIVISION

GIVE FLUID LINES A LONGER LIFE SPAN

PROTECT FLUID CONVEYING systems against vibration and shock, and you'll save on both repair and replacement costs, avoid expensive delays. For over 30 years Barco Flexible Joints have been doing exactly that. By means of responsive movement, Barco compensates for expansion and contraction, absorbs the destructive effect of vibration and impact. Write for detailed engineering data. Barco Manufacturing Co., Not Inc., 1800 Winnemac Avenue, Chicago 40, Illinois.



BARCO FLEXIBLE JOINTS

Not just a swivel joint ... but a combination of a swivel and ball joint with rotary motion and responsive movement through every angle.

FREE ENTERPRISE—THE CORNERSTONE OF AMERICAN PROSPERITY

"MOVE IN EVERY DIRECTION"

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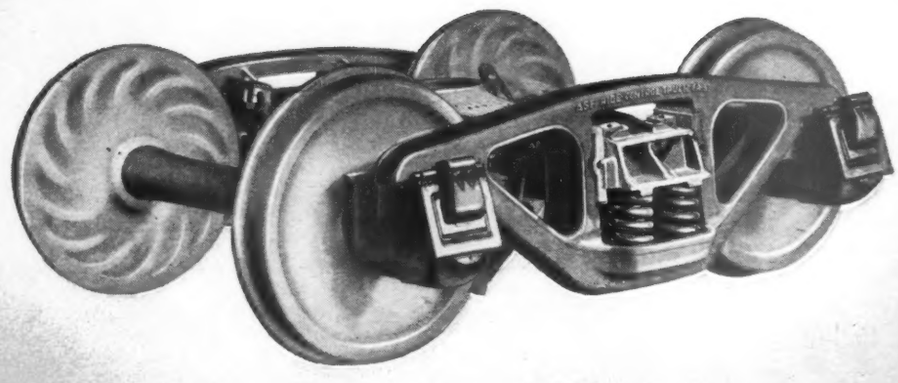
the Revenue Ride!



● Lading. Rolling stock. Roadbed. The smooth-riding Ride-Control Truck is easy on *all three.*

Soft, long-travel springs absorb impacts resulting from track inequalities. Uniform friction cushions *all* bolster motion.

Result: Fewer and lower damage claims; less maintenance—at *all* speeds.

Operating economies are proved by many millions of miles of better performance—by time-after-time re-orders for *every* purpose, from hoppers to box-express.

Already, more than 40,000 car sets are in service or on order for 64 railroads and private car owners.

A-S-F *Ride-Control* TRUCK

NO SPRING PLATES • NO SPRING PLANKS

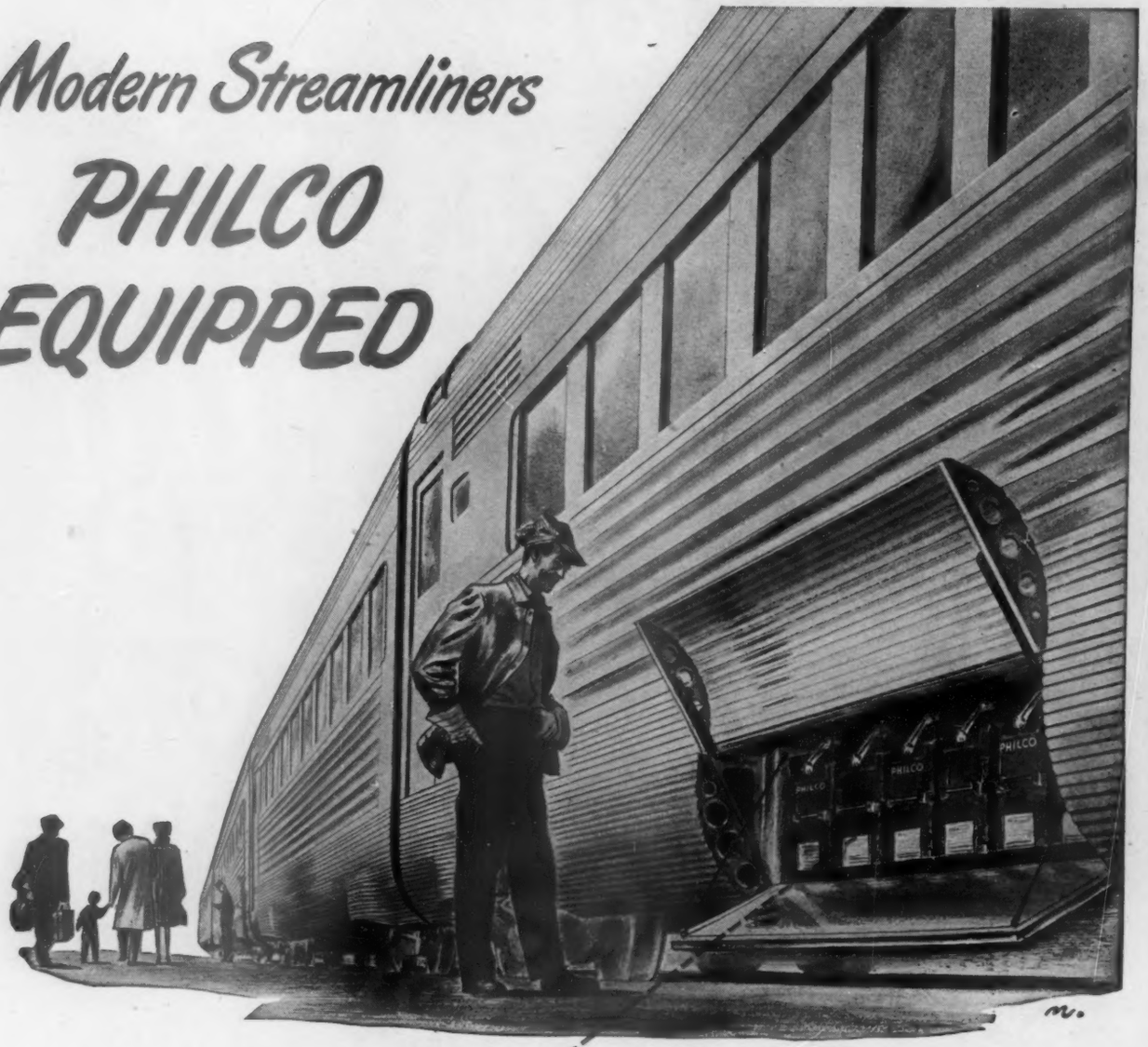
LONG SPRING TRAVEL • CONSTANT FRICTION CONTROL

AMERICAN STEEL FOUNDRIES

MINT-MARK OF ⬡ FINE CAST STEEL

Modern Streamliners

PHILCO EQUIPPED



Philco, too, has been planning for the new era of luxury train travel. And Philco is ready with car lighting and air conditioning storage batteries of ultra modern design to provide the new passenger comforts and conveniences soon to come. You can expect a lot more from these modern Philco Batteries . . . top capacity with abundance of reserve power to maintain facilities when long stops are necessary. Their extra rugged "railroad" construction assures long-life, dependability, ease of maintenance and low cost. Write for specification data. PHILCO CORPORATION, Storage Battery Division, Trenton 7, New Jersey.

PHILCO

FOR FIFTY YEARS A LEADER IN STORAGE BATTERY DEVELOPMENT

FAIRBANKS-MORSE DIESEL LOCOMOTIVES

6000-Horsepower Dividend-payers

New speed, new cleanliness, and new glamour to attract passenger traffic . . . faster schedules to build freight revenue . . . those are recognized advantages of diesel locomotives.

Fairbanks-Morse Diesel Locomotives make still another contribution to railroad earnings. They reduce operating costs.

How? By highly efficient use of low-cost fuel. By minimizing maintenance and servicing time and expense through simple engine design and because fewer diesels are required per locomotive. Each Fairbanks-Morse Diesel develops 2000 horsepower!

Fairbanks, Morse & Co., Chicago 5.

Fairbanks-Morse

A name worth remembering

Diesel Locomotives • Magnetos
Diesel Engines • Scales • Pumps
Generators • Farm Equipment
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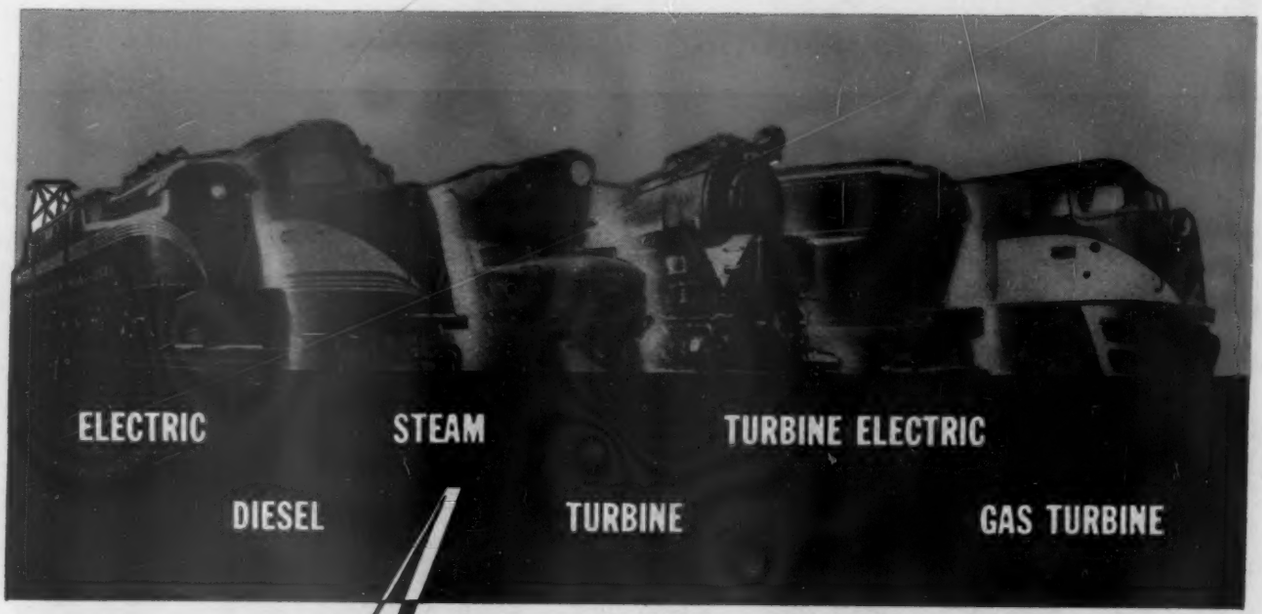


PHOTOGRAPH COURTESY WESTINGHOUSE ELECTRIC CORPORATION.

All operate on TIMKEN ROLLER BEARINGS

Timken Roller Bearings make all types of modern motive power perform more efficiently; increase their availability; reduce operating and maintenance costs.

Sixteen years ago the Timken locomotive demonstrated conclusively the value of roller bearings for motive power; since that time a constant swing to Timken Bearings for all types of locomotives has been in progress.

Today there is hardly a new locomotive of any type built that does not have them. The railroads know it pays — and so do the locomotive builders. The Timken Roller Bearing Company, Canton 6, Ohio.

TIMKEN
TRADE-MARK REG. U. S. PAT. OFF.
RAILWAY ROLLER BEARINGS

Outstanding IN PERFORMANCE

The Improved COMMONWEALTH 6-WHEEL TENDER TRUCK

Lighter Weight • Swing-Motion Bolster • Equalized • Easier Riding •

This latest Commonwealth tender truck follows the principles of the six-wheel passenger car truck design, yet it has been simplified for tender service.

Each succeeding month and year of operation has proven the superiority of this truck with an outstanding reduction in overall tender maintenance work. This dependable and economical performance is the result of an improved design incorporating such important basic principles as swing-motion bolster, positive equalization, ample spring deflection, and accessibility for inspection of parts.

The advantages of this design of tender truck have been thoroughly demonstrated in service on such railroads as the Illinois Central, Soo Line, R. F. & P., and C. M. St. P. & P.

GENERAL STEEL CASTINGS

EDDYSTONE, PA. GRANITE CITY, ILL.

Get in touch with Bethlehem when you need—

RIVETS...

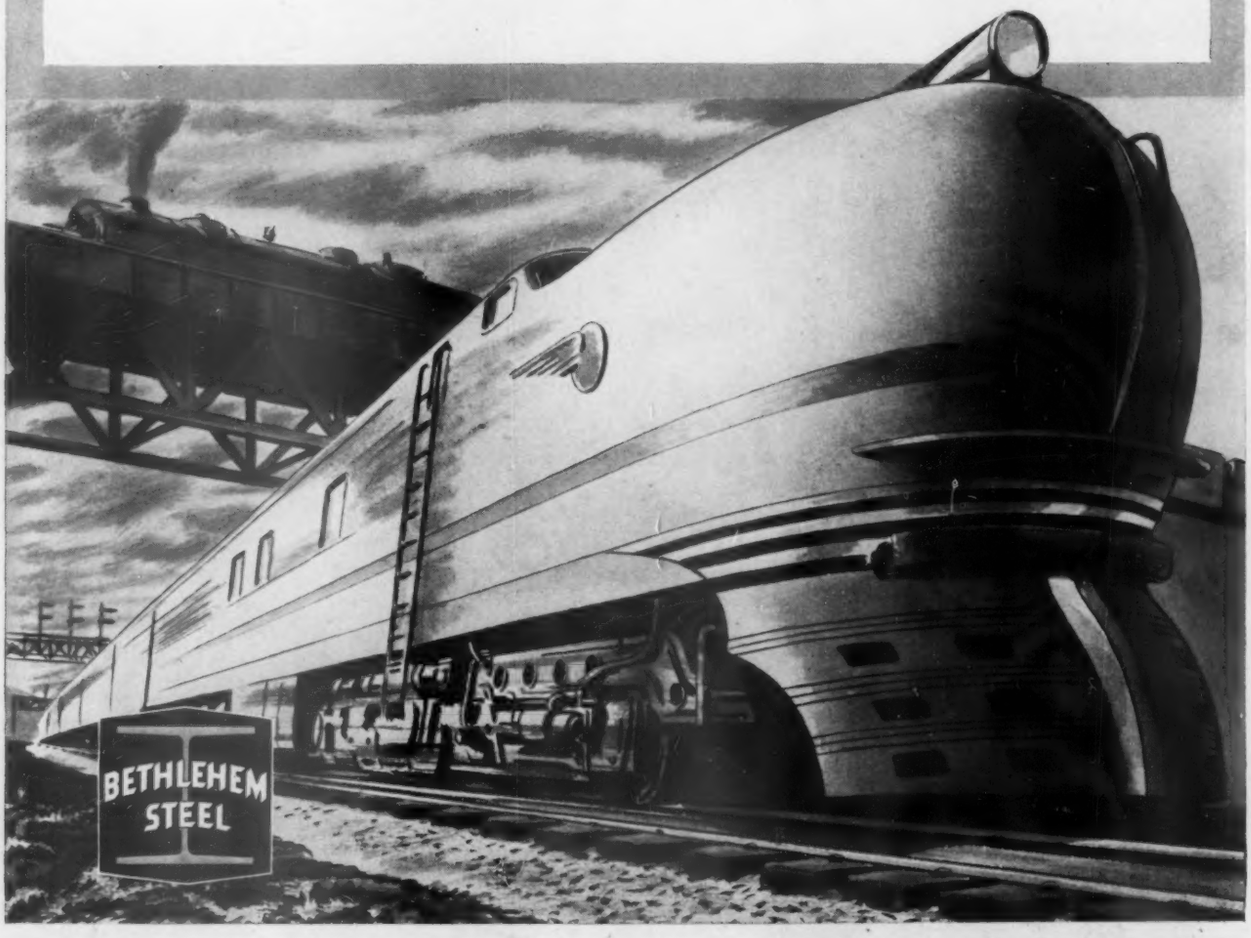
MACHINE BOLTS...CARRIAGE BOLTS...LAG BOLTS...

HOT-FORGED NUTS...WASHERS...CLEVISES...

TURNBUCKLES...THREADED RODS...SPECIALS

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation

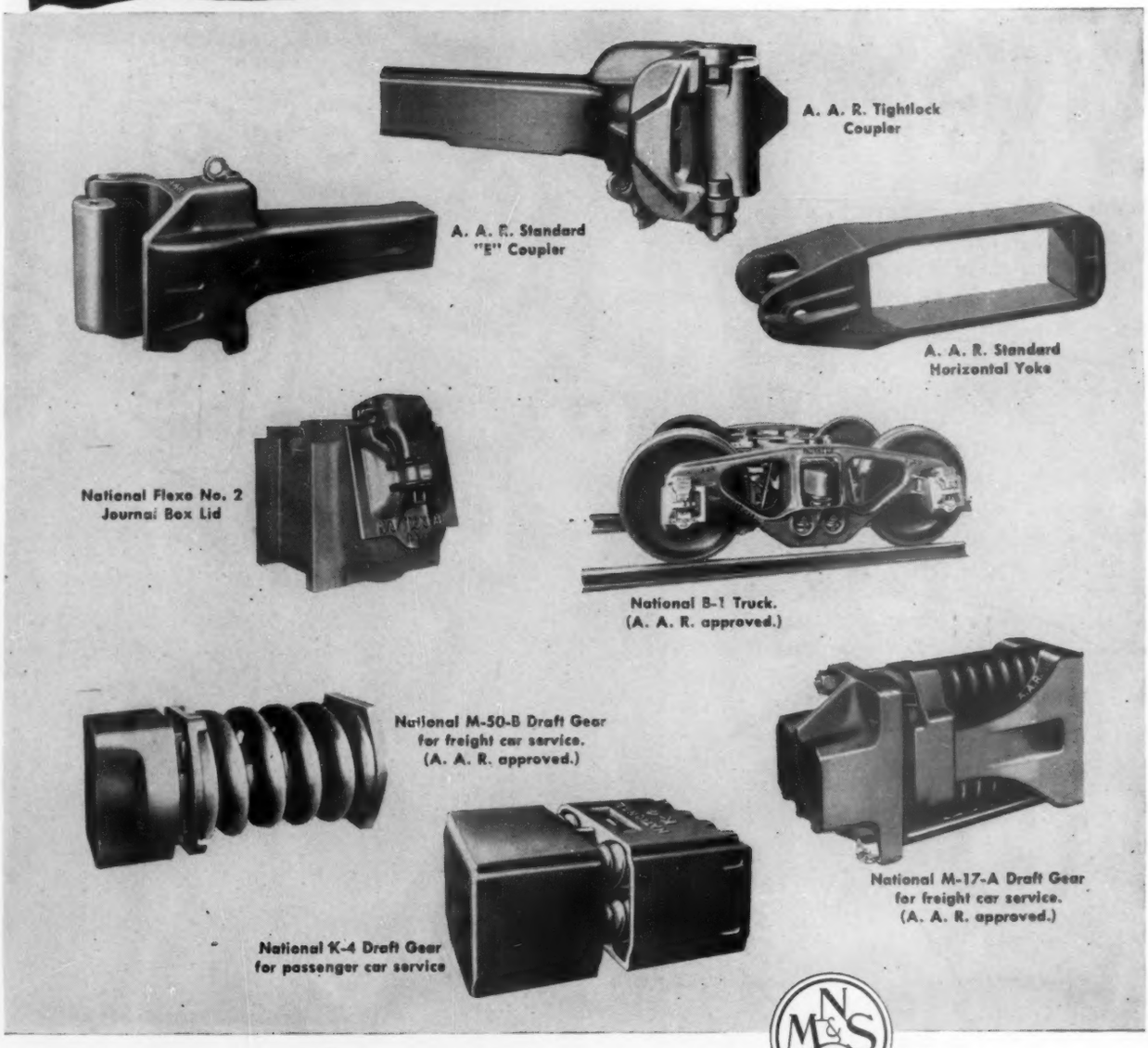


Bethlehem supplies every type of Railroad Fastening

Ask your Inspectors about "NATIONAL" QUALITY

• They know our processes and methods. They will tell you what sticklers we are for holding specifications. They see how carefully we make patterns and molds. They know how we adhere to close tolerances, good appearance and quality material.

And . . . our own quality control requirements are so rigid that acceptance of our products presents no problem to your inspectors.


A. A. R. Tightlock Coupler
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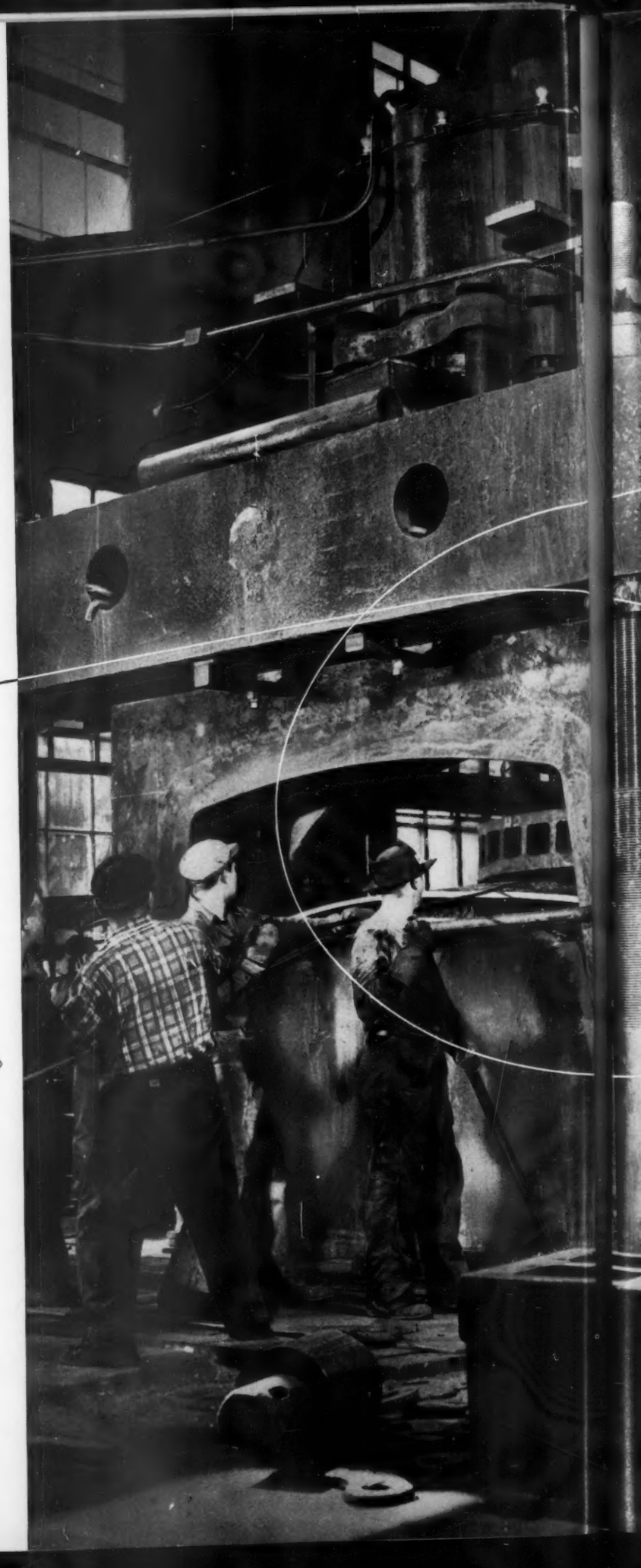
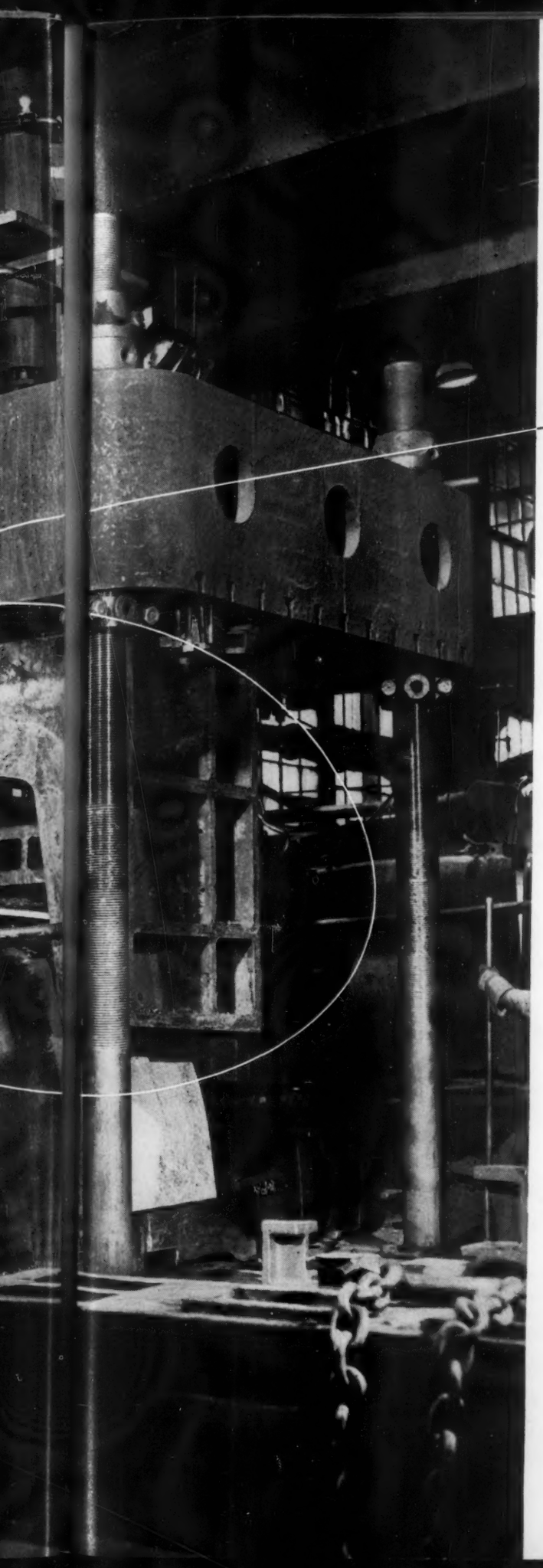
SALES OFFICES: Cleveland, Chicago, New York, Philadelphia, Richmond, San Francisco, St. Louis • WORKS: Cleveland, Chicago, Indianapolis, Melrose Park, Ill., Sharon, Pa.

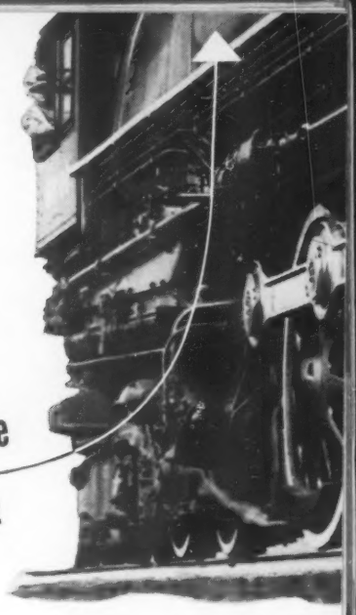
Facts About Steam
Locomotive Parts

Flanging Press

What happens here . . .







. . . may make a huge difference in service and safety here!

Eighth Advertisement of an Important Series

IN this hydraulic flanging press in ALCO's shops a hip sheet is being formed which will become the upper section of a throat sheet in one of the largest boilers used on modern steam locomotives.

To accomplish the purpose of this sheet it must be formed so that its shape changes from a slightly crowned box section at the fire box end to a circular section at the boiler shell.

The hydraulic press eliminates the hand forming that a less specialized shop would be forced to use.

Here again you see how specialized equipment in the hands of specialized ALCO craftsmen is concentrated on specific work—sometimes a single operation on a single locomotive part—in ALCO shops. Thus the ultimate in fine workmanship is obtained. The same principle is carried on throughout ALCO's large-scale production of modern locomotives and locomotive parts.

In no other way can consistent top quality be combined with economy. That is why genuine ALCO replacement parts give you the greatest possible value per dollar in safety and service! American Locomotive Company, 30 Church Street, New York 8, N. Y. Manufactured and sold in Canada by the Montreal Locomotive Works, Ltd.

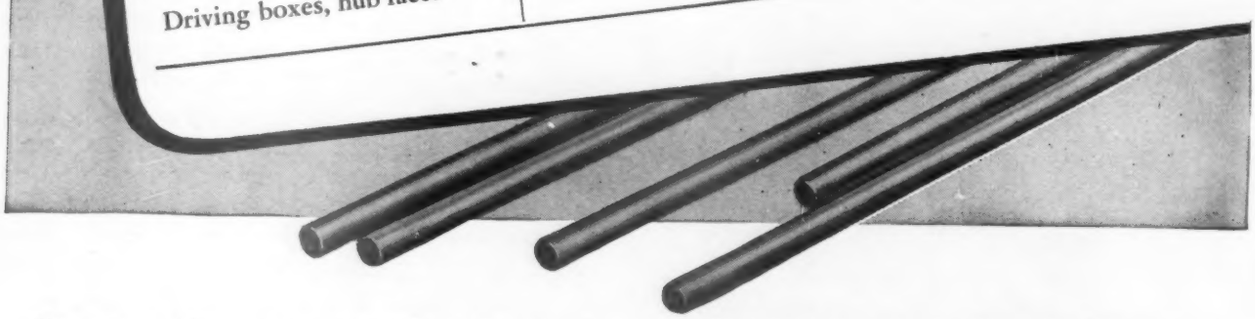
American Locomotive

Alco

THE MARK OF MODERN ENGINEERING

OXWELD *Supplies the Correct Rod for the Job*

For These Jobs	Use These Rods	To Get These Results
Firebox sheets, frames, bolsters, cylinders	No. 1 High-Test Patented Steel Rod	High tensile strength Ductility
Building-up rail ends and other trackwork	MW Patented Steel Rod	Abrasion resistance High tensile strength
Signal and traction bonds	No. 19 Cupro Rod	Ductility Quick solidification
Aluminum sheet and castings	No. 23 Aluminum Rod	Rigidity High tensile strength
Cylinders and other iron or steel castings	No. 25M Patented Bronze Rod	Easy machinability Strength
Coach sides and equipment, dining-car equipment	No. 28 Columbium-Bearing Stainless Steel Rod	Corrosion resistance Ductility
Piston heads and other moving parts	No. 31T Patented Bronze Rod	Wear resistance Heat resistance
Couplers, draft gears, truck sides, piping, forgings	No. 32 CMS Patented Steel Rod	Superior tensile strength Ductility
Driving boxes, hub faces	No. 39 Bronze Rod	Wear resistance Shock resistance



OXWELD welding rods are especially developed to make the best possible repairs on railroad equipment. The many kinds and sizes of OXWELD rods allow you to select the one that will give the most satisfactory results on each job.

THE OXWELD RAILROAD SERVICE COMPANY
Unit of Union Carbide and Carbon Corporation
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Carbide and Carbon Building Chicago and New York
In Canada:
Canadian Railroad Service Company, Limited, Toronto

SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS

"MW" and "Oxweld" are registered trade-marks of Union Carbide and Carbon Corporation.

FOR LOWEST COST PER YEAR OF SERVICE LIFE

—no other material can equal

ALLOY STEELS

You just can't beat alloy steels for length of service life. They continue their superior performance under adverse conditions long after ordinary steels have worn out or failed.

That's why they cost less per year of service life, even though their first cost may be higher than that of less efficient grades of steel. And that's why you should use alloy steels for locomotive side rod blanks, as shown above, and for pins, bolts, slides and other vital operating parts of railroad equipment.

Alloy steels have other qualities which recommend them for your use, too. Their high strength-to-weight ratio permits the use with safety of lighter equipment and smaller sections. Their super-toughness provides protection against severe shocks, reversal of stresses or overloading. Their uniform hardness means reduced wear. And their resistance to fatigue, heat, cold and corrosion further adds to service life.

Republic—world's leader in the production of alloy steels—is ready NOW to assist you in the most efficient and most economical application of these fine steels. Write to—

REPUBLIC STEEL CORPORATION
Alloy Steel Division • Massillon, Ohio
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Export Department: Chrysler Bldg., New York 17, N. Y.

Republic ALLOY STEELS

Also Carbon and Stainless Steels—Sheets—Plates—Pipe—Upson Bolts, Nuts and Rivets—Electrunite Boiler Tubes

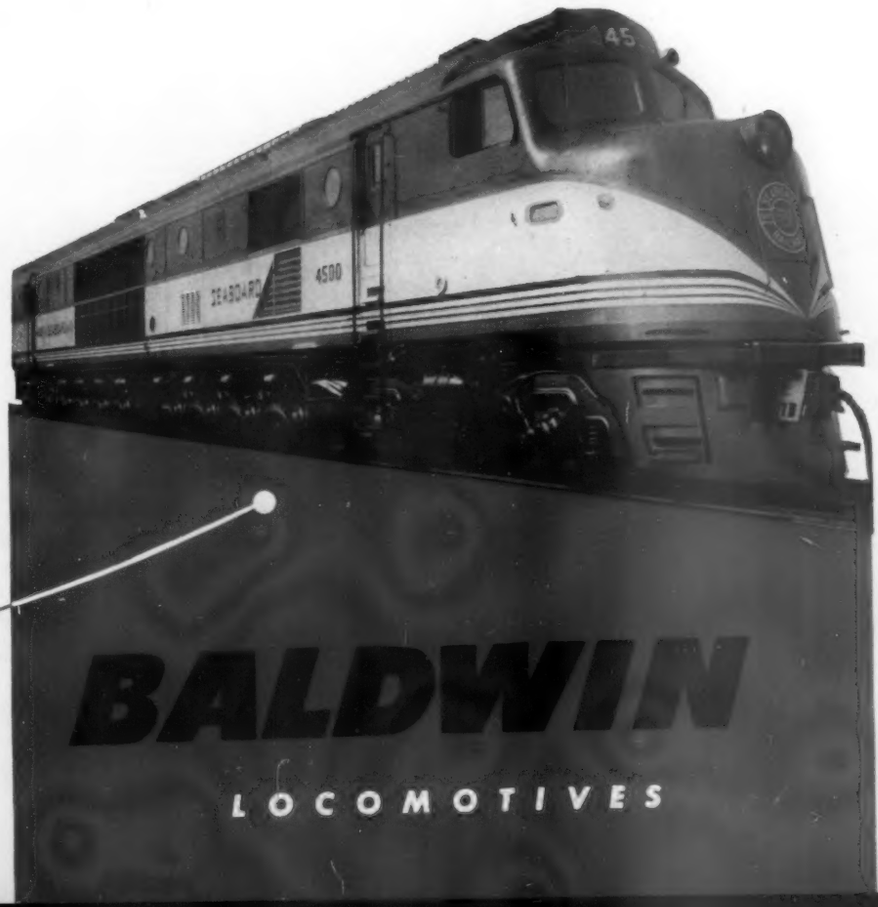
Roadworthiness STARTS

When you check details on the new Baldwin-Westinghouse Diesel-Electric Road Locomotives, you'll find that the designers did much more than "just make everything bigger." These units are modernized from the rails up! Take the articulated running gear for instance. Based on principles developed in 50 years of pioneering in electric locomotive design, and proven in millions of miles of the most punishing service, this running gear greatly increases "road-ability" at high speeds. It permits the use of unusual traction motor reserve capacity. At the same time, loading is kept to a maximum of 51,250 lb. per driving axle. The locomotive pulls the train *through* the running gear, so that the cab is saved from damaging stresses and strains.

This is only one of dozens of advanced features that recommend the new Baldwin-Westinghouse Diesel-Electric Locomotives for your road service. A representative will be glad to tell you all about them.

The Baldwin Locomotive Works, Philadelphia 42, Pa., U. S. A. Offices: Philadelphia, New York, Boston, Chicago, Detroit, St. Louis, San Francisco, Houston, Birmingham, Norfolk, Cleveland, Pittsburgh, Washington.

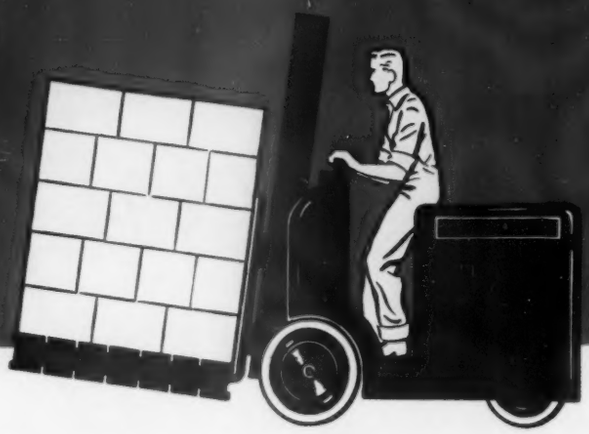
with this pedigreed running gear!



BALDWIN

LOCOMOTIVES

Watch the swing to Electric Industrial Trucks



More years of better service at less cost

Once again production costs loom up—larger than ever before—as industrial management's top problem. In material handling, the spotlight has turned inevitably to the *cost per ton* of goods transported—the only standard keyed to profits. That is why more and more industries are swinging to *electric* industrial trucks, with these exclusive performance features—

Inherently dependable—electric motor-drive with minimum wearing parts, low operating temperatures, vibrationless motion, basically simple and sturdy construction.

Built for long, hard service—over 90% of all electric trucks sold in the last 20 years are still in service on tough jobs of all types.

Provide maximum safety—best working conditions—safe tamper-proof speed, positive braking, quiet, clean and fume-free.

Efficient use of lowest cost power—electricity, stored in husky trouble-free batteries, charged off-shift or changed in two minutes.

Records prove lowest overall operating cost—including interest on investment, insurance, depreciation, power and maintenance.

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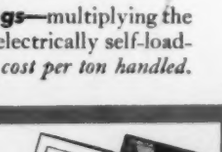

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C
OF SCRAP and THAT STEEL YOU WANT
IN THE OPEN HEARTH FURNACE, A TON OF SCRAP CAN REPLACE A TON OF HOT PIG IRON... AND HERE'S WHAT IT TAKES TO PRODUCE PIG IRON
IRON ORE
IRON ORE
COAL
LIME-STONE
HOURS OF BLAST FURNACE TIME
HOURS OF BLAST FURNACE LABOR

To you "scrap" may be just worn-out machinery, broken pipe and such junk---worth nothing to your business.

But it IS worth a lot to your business delivered to the steel producer. Scrap may be the means of supplying you with more of the new steel and steel products you want.

As every buyer knows, steel is produced by "blending" hot pig iron and scrap in the open hearth furnace. Each ton of available scrap can replace a ton of pig iron. The greater the shortage of scrap, the heavier the drain on pig iron supply to produce a given tonnage of steel.

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Railway Age

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★

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FOR POWER INTERLOCKINGS

Control will be the "better half" of your railroad's planned interlocking installations —whether they be electro-pneumatic or electric, and employ mechanical locking or relay locking.

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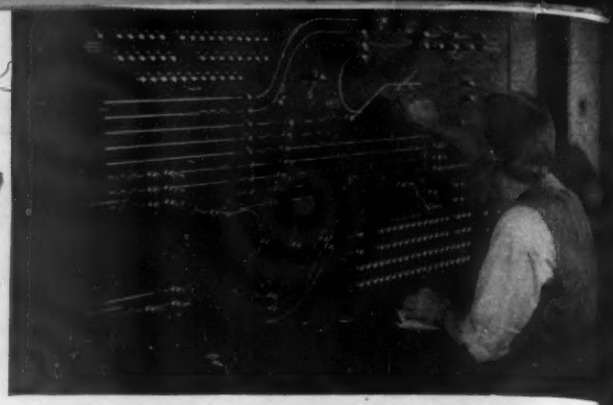
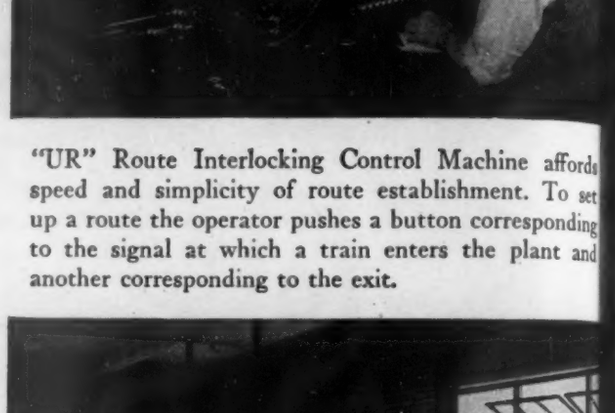
Our representatives will gladly cooperate with your engineers in studying prevailing and anticipated traffic conditions and physical characteristics of the area, to help you plan the most effective and efficient control for your interlocking plants. Just write the nearest "Union" district office.



"UR" Route Interlocking Control Machine affords speed and simplicity of route establishment. To set up a route the operator pushes a button corresponding to the signal at which a train enters the plant and another corresponding to the exit.



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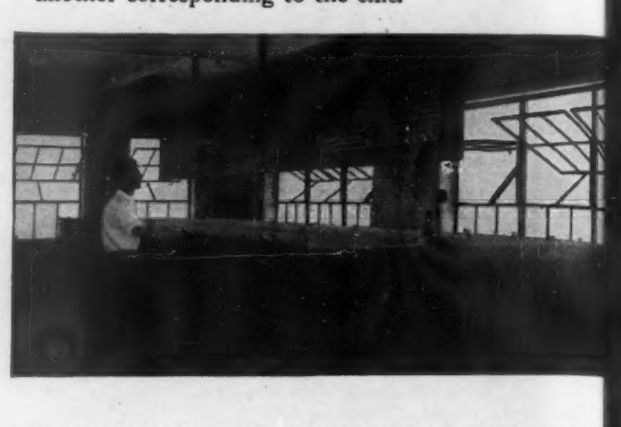

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UNION SWITCH & SIGNAL COMPANY

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The Week at a Glance

PROPHET JOHNSON: Breaking carloading records as they are, the railroads are still handling only 85 per cent of the freight they would be moving if they had enough cars for everybody, says Colonel Johnson, whose latest comments on the shortage are summed up in a news story herein. He figures that 64,000 carloads of freight a day are piling up in warehouses for lack of cars. By the time the railroads are able to eat away that backlog (next March, he estimates) current business will be all they can handle, or more, so car shortage figures are likely to keep on coming in for a long time as the colonel sizes up the prospects. But loading totals for the week ended October 26 are 17,000 cars ahead of his earlier estimate of the railroads' maximum capacity for this fall's peak period, and John L. Lewis is thundering in the distance.

●

EXPRESS RATES UP: Evidently with some misgivings, the I. C. C. has approved an increase in express rates, limited to a year or less, which are designed to allow the railroads some compensation for handling that form of traffic. As indicated in our news pages, the commission sees something awry with the arrangements between the express agency and some of the railroads, and it has put the spotlight on what it considers a great disparity among the roads in the proportionate change in revenue received per express load unit handled. While the temporary rate increase is in effect, it's up to the express agency to make a case for a permanent rate adjustment, says the commission.

●

MADE OVER FOR DIESELS: As a part of its program to Dieselize its Fitchburg division completely, the Boston & Maine has adapted the existing back shop at Mechanicville, N. Y., to the running maintenance and repair of a steadily growing fleet of Diesel-electric locomotives of various sizes, ranging from 600-hp. switchers to 5,400-hp. road freight types. An illustrated article on page 716 describes this facility, outlining the structural alterations that were required and the provisions made for lighting and heating the building and for servicing the engines.

●

PLAYING WITH FIRE: Whether or not the railway brotherhoods can deliver the vote of their members on election day to the extent that they contend, the politicians—many of them, at least—think that they can, and act accordingly. And the one test by which a candidate's fitness for office is judged by the union leaders appears to be this: What has he done (or will he do) for us? What the candidate has done, or promises to do, for the welfare of the country, or for the preservation of the democratic principles upon which its government was founded, makes no difference to labor leaders of this type when his qualifications are appraised. The only thing that counts with them is his unfailing adherence to the union's cause whenever a show-down occurs. As the leading editorial points out, one result of this narrowly restricted appraisal of a candidate's qualities is the support the politically and financially conservative railroad brotherhoods this year are giving to an adherent of Communist philosophy who, if he could put the party program into effect, would do away with the capitalist system of free enterprise and do away with legitimate unions. The brotherhoods' membership, and the rest of the country, have a right to expect the heads of these powerful unions to look more deeply than they appear to into a candidate's fitness for office.

●

CHEAP FLYING: The airlines may have a pretty liberal share of the cream of the passenger business already, but some of the people on the Department of Commerce payroll have an idea that the airlines ought to get down to the ordinary, big volume, skim milk transportation level. They will have to cut their fares to somewhere around three cents a mile to do that, says a current department report, reviewed in the news columns. The conclusion is advanced that such a rate is feasible, and to be attained in two or three years, if the operators will concentrate on a coach-type service, so to speak, without the frills the air traveler of today has been encouraged to expect.

●

FIRE PROTECTION SECTION: Among the matters receiving the attention of the recent Chicago meeting of the A. A. R. Fire Protection and Insurance Section (a report of which appears on page 720) the protection of Diesel-electric locomotives from fire damage on the road and in the shop took a leading place. An editorial this week comments on the same subject, emphasizing the need for builders and users of this type of power to get together to minimize the opportunities for fires to occur. Committee reports considered at the convention set forth seven criticisms of Diesel design from the fire hazard viewpoint, while one of the speakers enumerated factors to which special attention should be given in planning, equipping and managing a Diesel shop.

●

WHAT CARS TO REBUILD: What to do with old passenger cars hasn't been the railroads' top worry for the past couple of years, when they could have used more of them, but with more and more new cars coming from the builders, and with fewer passengers to haul than there were in the days of big troop movements and scanty gasoline supplies, it is time to decide whether to scrap old equipment, to assign it to secondary runs, or to put it through a sufficiently vigorous renovation to fit post-war requirements. For that reason a recent committee report to car department officers, appearing on page 723 this week, is particularly timely. This committee suggests the complete modernization of 2,000 cars, partial modernization of 12,000, and scheduled maintenance of 19,000. What the committee means by complete or partial modernization is set forth very definitely, too, in the light of its analysis of what the customers are going to expect the railroads to provide in the way of comfort, attractiveness and convenience.

THEY PAY TO GET IN: In Scranton the Railroad Y. M. C. A. is holding a series of meetings for employees, sponsored jointly by management and unions, in which top-flight spokesmen for labor, for the railroads, and for government agencies dealing with railroad labor matters are airing their views on the questions on which employer-employee relations rather frequently get snarled up. In this issue is an article based on the address of President White of the Lackawanna at the first of these gatherings. The 300 or so Lackawanna employees who heard him *paid* for the opportunity—and the article is evidence that they got their money's worth. It's likely that a good many of them came away with a new understanding about what their boss thinks about unions, a different understanding than the common run of brotherhood publications would give them. Any union administered for the benefit of its members stands to profit from their knowledge of the way the boss is thinking—simply summed up by him in the words of the Golden Rule.

●

WHERE DANGER LIES: Some, at least, of the brotherhood leaders let their publications go on preaching the old gospel that only their unflagging vigilance stands between the poor underdog railroad employee and a terrific beating from the profit-gorged company he works for. There are no statistics available to show how many employees take such talk at its face value, but there is evidence that there is another danger threatening the security of the railroad man's job and the integrity of his union, and he isn't hearing much from his brotherhood leaders about that danger. As Mr. White pointed out in his illuminating and challenging remarks, that danger is the infiltration into union ranks of subversive elements bent on forcing those organizations into irresponsible, un-American actions that ultimately could cost their membership, and maybe the rest of us, dearly.

●

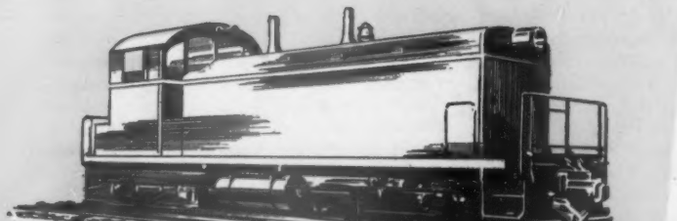
SECTION 22 RATES: An article by G. Lloyd Wilson draws a comparison between the so-called Section 22 procedure for making freight rates on government traffic in this country and the British system of "agreed" charges, which applies to selected forms of commercial traffic. While these arrangements, affording the government rate concessions not available to private shippers, do simplify somewhat the usual procedures applicable in determining rates and assessing charges, they by no means go as far in that direction, apparently, as the British "agreed" charges arrangements, which are available to many private shippers.

●

CULLED FROM THE NEWS: The I. C. C. has received about 70 briefs in Ex Parte 162, including one from the O. P. A. advising it to adopt a new basis for figuring "fair" rates. . . . Pere Marquette's merger into the C. & O. has the approval of the I. C. C. finance staff. . . . An "emergency" board is considering the demand of the unions for the general 18½ cents an hour increase for short line non-ops.

1946 PARADE OF THE VETERANS

Tireless Veterans – These Yard Goats



● There's no particular glamor about switchers — until you look at the consistent monthly work records of typical General Motors Diesel switchers. Then you really see something.

For General Motors switchers seem tireless. It is commonplace for them to average 20 hours a day, year in, year out.

The 59 switchers spotlighted here indicate, better than words, how Diesel specialization and know-how sum up to dependability in switchers — just as they do in General Motors freight and passenger Diesels.

CHICAGO, ROCK ISLAND & PACIFIC

37 — 600 H.P. General Motors switchers, operating since the first one was placed in service in May 1937, have worked a total of 2,160,529 hours as of July 31, 1946. Average availability 95.5%. The record figures to —

662 hours per month

LOUISVILLE & NASHVILLE

5 — 600 H.P. General Motors switchers, with first to enter service September 1939 and as of July 31, 1946, have shown average availability of 93.6%. During this period they have worked a total of 199,285 hours. Average of —

649 hours per month

BOSTON & MAINE

11 — 600 H.P. General Motors switchers, the first going into service in August 1936, have been available 90.3% of the time as of May 31, 1946. Total hours worked, 600,316 — an average of —

609 hours per month

NORTHERN PACIFIC

6 — 1,000 H.P. General Motors switchers, from February 1940, date first switcher entered service, to July 31, 1946, had average availability of 97.2%. Total hours worked 279,243. Average of —

662 hours per month

GENERAL MOTORS LOCOMOTIVES

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS — LA GRANGE, ILL.

RAILWAY AGE

Railway Unions Aid Communists' Candidate

Representative Vito Marcantonio of New York enjoys the distinction of being the most abject follower in Congress of the Communist "party line." In its October 12 issue, the paper "Labor," official organ of most of the "standard" railway labor organizations, had the following to say of him:

"Congressman Vito Marcantonio, running for re-election on the Democratic and American Labor party tickets, was 100 per cent 'right' on the Crosser Bill. In fact, he cooperated with Crosser in formulating the strategy of the closing hours of the battle. In that connection, chiefs of the rail unions, who were directing the struggle, declare his services were 'invaluable'."

In the same issue, "Labor" also announced that the "railroad boys" had endorsed for re-election Republican Senator Vandenberg of Michigan—a man who is about as completely the opposite number of Marcantonio as could be found. The reason why Vandenberg is approved is that he also was "right" on the Crosser Bill—which largely increases "social security" benefits to railroad employees, already on a far more favorable level than those of any other class of citizens, and even gives them insurance against illness and pregnancy, at their employers' expense. About the only tinge of Red to be found in Vandenberg is his advocacy of the St. Lawrence Seaway, a project which the "railroad boys" say they oppose, but not enough, quite evidently, to persuade them to vote against a candidate who favors it.

These instances merely serve to emphasize what is a patent fact, namely, that the leaders of the "standard" railway labor organizations do not care a rap what a candidate for office stands for or opposes in the way of decent citizenship, just so long as he will put his okay without question on any legislative measures they indicate as "must," and the Crosser Bill was one of these.

Insincere Anti-Radicalism

The railway labor organizations which sponsor the paper "Labor" are feuding with A. F. Whitney, president of the Brotherhood of Railroad Trainmen, and, as a consequence, "Labor" lets Whitney have both barrels in almost every issue. One of their main complaints against Whitney is his association with left-wing organizations and the C. I. O. Whitney is adjudged a sinner for affiliating with "Trojan horse" groups, but his critics apparently have no doubts about the soundness of their own Americanism when they support for re-election the most outspoken champion of Moscow to be found in Congress.

Plainly, what the editors of "Labor" really object to in Whitney is not his leftish tendencies but his refusal to dance to the tune they play. They belabor him for his radicalism simply because that is the first stick that comes handy.

It is or should be, of course, a source of satisfaction to everybody in the railroad business that unionism in this industry is predominantly in the hands of respectable railroaders, and not of alien agents or such hoodlums as have been shown to dominate many unions in other branches of industry.

The slogan "elect your friends and defeat your enemies" has worked well for the railway unions. No matter which party dominates Congress, the policy of the railway unions has assured them that they will have friends high in authority. But no mere slogan affords a safe guide to policy if it is pursued to the utmost literal extreme. To see the dominant railway labor organizations fellow-traveling along after Marcantonio is just plain ridiculous.

Only One Criterion

There would not be any unions of a kind which could demand Crosser Bills for themselves if the country had the brand of government which Mr. Marcantonio has shown he would like to have. The true friend of organized labor is the man who will, first of all, assure the continuance of the kind of country in which legitimate unionism can flourish. If a legislator does not meet that primary test, then no amount of support by him for specific legislation sought by the unions can accurately qualify him as "labor's friend."

The whole idea of domination of government by "pressure groups" is now being carried to a length which may ultimately destroy our traditional form of political organization. Public business today is the biggest business there is, and it cannot be managed effectively unless it is entrusted to men of at least some intelligence and integrity. If more and more voters—as "pressure group" voting requires—are going to quit looking at a candidate's qualifications and are going to cast their ballots entirely according to his willingness to do favors for the "pressure groups," then the end result is bound to be to turn government over to men who possess no capacity whatever for the job.

It is hard to see how the American nation can hold its own or even survive with such dangerous neighbors as it has across the seas, if its leaders are to be chosen regardless of any aptitude or ability except their appeal

to the predatory cupidity of various associations whose sole civic purpose is to vote themselves favors at the expense of the people as a whole. Imbeciles and even criminals could be elected to high office if the slogan "elect your friends and defeat your enemies" is to be applied with no discrimination whatever. Organized labor—and particularly railway labor—has reached its majority, not only in years but in power and knowledge, and the people as a whole have a right to expect it to behave accordingly.

Cooperation Needed

Referring to fire prevention and protection, a representative of a Diesel-electric locomotive builder made the statement that there would be no fires in this type of motive power if the railroads would keep them clean. Although good housekeeping is one of the primary objectives in any fire-prevention campaign—and it was given recognition as being a fundamental in fire prevention for Diesel locomotives by the Committee on Locomotive Construction at the last annual meeting of the A. A. R. Mechanical Division—that fact does not relieve the builders from the responsibility of making reasonable improvements in the design to simplify the housekeeping requirement. Furthermore, an analysis of the causes of Diesel locomotive fires suggests that a lack of cleanliness is not the only factor that makes fires in Diesel locomotives possible.

An inspection of the newer Diesel locomotives shows that all the nooks and crannies where oil-soaked dirt and rubbish might accumulate in the interior of these locomotives have not been eliminated. Such a splendid job has been done in the design and arrangement of the mechanical and electrical equipment in the Diesel locomotive units that the presence of these dirt-collecting places not only makes housekeeping more difficult but they seem out of place amidst the surroundings. It is recognized that most of the disastrous fires to which oil-saturated dirt has been a contributing factor have resulted from the ignition of the dirt beneath and not inside the locomotive superstructure, but if the more obvious spots are not given the attention warranted by the risks, then it is unlikely that every precaution has been taken to design the out-of-the-way locations around the running gear with good housekeeping in mind.

A review of the study made last year of the causes of Diesel locomotive fires by an A. A. R. committee shows that 19 of the 61 fires reported, or 31 per cent, were the result of brake-shoe sparks igniting oil-saturated dirt on the running gear and underframes. Some of these fires were disastrous because of the headway made before detection. The other 42 fires, or 69 per cent, were caused by conditions which in general could not be anticipated.

The records indicate very definitely that the solution to this problem is one requiring the cooperative efforts of the builders and the railroads. If these efforts result in a reduction of the causes of fires, then the need for protective equipment is lessened. It is the clamor for such equipment which is creating a headache for the builder in finding the space for it and in the deviation from standard design entailed by its installation. It would seem to be to the advantage of the builders and the railroads not to overlook any possibility for the prevention of fires in Diesel locomotives because any improvement would help to eliminate a source of annoyance to the builders and of both loss and annoyance to the railroads.

Service Tests Pay

One of the greatest aids to progress in the railway engineering and maintenance field is the general procedure under which many untried devices, materials and equipment of potential merit are tested under actual service conditions. Through collaboration between manufacturers and inventors and railway engineering officers there are, at any given time, literally hundreds of service tests under way throughout the country to determine the value of a multitude of new or improved products designed for use in the construction or maintenance of the fixed properties, especially the tracks. The willingness of railway officers to cooperate in conducting such tests has produced rich dividends in the form of generally lower costs achieved through more effective and economical construction and more efficient tools, equipment and machines.

The reasons why such a procedure is so productive are readily apparent—and these reasons also are convincing arguments in favor of continuing this cooperative effort, and, if possible, making it an even more effective aid to progress. Because of the special purpose it serves, the peculiar nature of its construction and the character of the forces acting on it, railway track presents highly specialized problems in design and maintenance—problems that rarely, if ever, yield completely to theoretical analysis. To a somewhat lesser extent this situation applies to bridges and other structures. Consequently, the approach in solving these problems must frequently be of an empirical nature, requiring that the performance of the proposed solutions be carefully observed under actual service conditions before they are accepted, modified or rejected.

How else, for example, can the efficiency of a new type of track fastening or appliance be determined? How else would it be possible to measure the performance of a new machine designed to perform a particular function in track maintenance? How else could the value of a new technique in track welding be ascertained, of a different arrangement of rail anchors, of a new method of inhibiting the corrosion of rails and fastenings, or of most other untried departures in the field of track design or maintenance?

It is apparent that the rate of progress is dependent to a considerable extent on the willingness of maintenance and engineering officers to make tests or to arrange test installations of new products. However, once a test installation has been made, the effort and the expense involved will be of little avail unless careful and conscientious observation is made of the service performance, and the results used as the basis for making an unbiased decision to accept the product as offered, to make or suggest modifications, or to discard it from further consideration.

Management View on Labor Relations

Unions are necessary, but closed shop is a questionable device, and coercion should be ended—Capital must have a return sufficient to attract savings needed to provide jobs

By ***WILLIAM WHITE***
President, Lackawanna

MY viewpoint may be different from that of representatives of labor and the public, but to differentiate the responsibilities of labor and management in the matter of human relations I find impossible. I believe in labor unions; that their continued existence is essential to the public welfare; and I earnestly desire that they should thrive and prosper. I am in a sense a union man, a member of an organization larger, far more important and vastly stronger than all other unions. That is to say, I am part and parcel of the American public, and my wish is that law, order and justice may at all times prevail. Of that same union all other Americans are members too.

Next to the Bible the most precious document in our heritage is the Constitution of the United States, particularly its Bill of Rights. It is intended to preserve the fundamental freedoms of our people, to protect the rights of minorities, and to protect the right of man to own property and preserve it against trespass by his fellow-men. It was intended that the Constitution should provide for the people "the pursuit of life, liberty and happiness," but the Constitution of the United States will provide those privileges only if there is respect for it, for the government upon which it is founded, for the public interest, and for law and order.

If the subject of human relations were to be discussed from the standpoint of the simple problem of relations between human beings one with another, it would not be necessary to talk very long because there has been provided for us a maxim which cannot be improved upon in our relations with one another; that is the Golden Rule, "Do unto others as you would have others do unto you."

Freedom of Discussion

We are fortunate that we can discuss this subject in an industrial democracy and express our opinions freely, secure in the knowledge that, even though we may not agree one with the other, we respect the right of each individual to speak his opinion freely; secure in the knowledge that retribution will not be visited upon us because we may say something that is contrary to the philosophy of some "ism." It matters not whether our views please or displease some political organization. We need not be fellow-travelers and follow a "line" laid down for us by a harsh, despotic government or a political machine.

If one considers that the so-called opposition of Capital and Labor is a natural phenomenon of an industrial democracy, and that the struggle of one with the other is democracy at work, we have little to fear from that opposition, provided always that each respects the legitimate interests of the other and bears in mind always the public interest. Democracy is a hard way of life, and so is industrial democracy, but it is the best way of life yet devised to preserve freedom and the rights of the individual, and to protect the rights of minorities.

It is necessary to remember when we talk about the responsibilities of labor and management in the matter of human relations that management is but a servant of Capital, and that our fundamental problem stems from the opposing and legitimate goals of Labor and Capital. It is well to consider the genesis of each. First, man existed on the bounty of nature, and by his labor alone acquired those things necessary to sustain life. He soon found that he could cultivate the ground, produce food and raise animals, so that he was not dependent upon nature alone. And he found also that he was able to produce more than he himself was able to consume. Therefore, he had a choice of ceasing to work as soon as his wants were supplied, or of continuing to work and saving a portion of the product of his labor. Some men wouldn't save, but ceased to work beyond the point of barely taking care of necessities. Others continued to work for their physical and material benefit, and their savings created the things necessary for sustenance and the tools and machinery with which to increase their productive capacity. These savings became what we now know as Capital. So that Capital had its origin in, and has always been the result of Labor.

How Capitalism Works

The use of Capital thus created by Labor resulted constantly in increased production with less expenditure of labor, and the savings of this production were again applied still further to increase production, enabling the earth's surface to support a constantly increasing population, until now it is so densely populated that destruction of Capital would result in world-wide starvation. In industry today it is absolutely essential that Capital and Labor go hand-in-hand to produce the best results in which

Scranton Tries Something New

The accompanying article is the substance of an informal talk made by the Lackawanna's president at a meeting held at the Railroad Y. M. C. A. at Scranton, Pa., on October 14, attended by some 300 of the company's employees. This meeting opened a series of eight weekly sessions being held under the joint auspices of local officers of the railroad and of the various railroad labor organizations—the idea for the meetings originating with Bert L. Liles secretary of the Railroad Y. M. C. A. A nominal charge is made for attendance at the meetings.

Speakers in addition to Mr. White who are expected to address the group include the following: Thomas Holleran, vice-president of the M. of W. organization; J. N. Bradin, vice-president, American Arbitration Association; Eric Peterson, vice-president, International Association of Machinists; L. W. Horning, vice-president, New York Central; Professor A. W. Smith, Cornell University; Frank Douglass, chairman, National Mediation Board; Fred Aten, president, Railway Employees' Department, A. F. of L.

The chairman of the committee in charge, Edgar Thomas, represents the Machinists' Local, No. 380, and Mr. Liles is secretary-treasurer. Other members of the committee include representatives of ten of the labor organizations and three officers of the railroad.

they have a common interest. The view that humanity shall loan its labor to the man who owns capital for the benefit of Capital is an extinct view. The logical function of Capital is to be put at the disposal of mankind, to be combined with Labor to make that Labor more productive for the benefit of the community; and the owners of capital are entitled to a fair reward for its use.

Management, being the servant of Capital, has thus the responsibility of seeing that Capital gets its reward, that Labor gets a fair return for its services; and it must combine these two functions in the public interest. If it fails to serve the public interest, then both Capital and Labor will eventually be deprived of their legitimate reward. There are those who conceive it to be the function of management merely to provide jobs. Nothing gives management more pleasure than to be able to do that; and nothing is more painful to management than to find itself compelled to deprive men of jobs; but management must serve the public interest also, and is responsible for the use of Capital to insure that it is employed wisely and gets its fair reward. If the public interest is not served there will be no jobs, and if Capital does not get its reward there will be no Capital with which to provide the means of a job. Thus the intertwining interests of all three must be served by management.

How Railroad Labor Profits

Railroads do not produce traffic. They are merely the transporters of goods and people, and the amount of goods and people that they transport is dependent upon the economic prosperity or otherwise of the country, and upon how well they serve the public in transporting goods and people. If we do not serve well and our price is too high, we suffer the consequences in reduced income. If we do not produce efficiently and our price gets too high, the public will not use and pay for our service. Thus, when management serves the public interest well, Labor profits; and to serve the public interest well, management is responsible for productive efficiency, which places upon management the responsibility of insuring the efficient use of Labor, and with that responsibility management must have the power to direct. The responsibility to direct is one upon which there should be no encroachment by Labor.

There have been various moves made by Labor to circumvent the power of management to direct. I refer to the attempt made by some labor organizations to represent and bargain for foremen. This is clearly a trespass upon the right of management to direct. There need be no line of cleavage between management and Labor, but there must be a line that divides the responsibility of each, and, if a proper balance is to be maintained, then there should be no encroachment beyond that line. There is no more justification for Labor to interfere with management's right to direct by an attempt to represent and bargain for supervision, than there would be for management to interfere in the affairs of labor organizations.

In its dealings with Labor, management must recognize the principle of collective bargaining, and in that process it must enter into agreements covering the wages and working conditions of Labor that are fair and equitable to Labor, with due regard for the public interest and the reward that is due Capital. After it has entered into agreements in good faith, it must see that those agreements are observed, and to that end it has the responsibility so to educate those who have immediate and direct supervision over Labor that they carry out the terms of such agreements fairly and equitably and without sharp practice.

Management of every company has the further responsibility, if it expects Labor to recognize the interest of Capital and the public as well as its own interest, of keeping Labor fully informed as to the results of the conduct of a business and about its problems. It is not sufficient merely to pay Labor for its services. Labor's interest cannot be divorced from the interest of the Public, nor of Capital and its servant, Management. If Labor is to exercise the right kind of industrial statesmanship, it is the legitimate function of Labor to secure for itself a fair share of the income of a company and to secure reasonable and proper working conditions; and Labor has the right also to share in the rewards of increased productivity. But Labor must, if our form of economy is to thrive, have adequate consideration for the rewards of Capital and for the public interest. Labor cannot exercise proper judgment in trying to preserve a proper balance in our economy between Capital, Labor and Consumer if Labor is denied the opportunity to know where that balance lies; but there is an increasing recognition among management of the importance of keeping its employees fully informed about the business in which they are engaged.

Capital and Labor make their living by supplying useful articles or services which the Consumer can buy. Employer and employee can both prosper by working together, but neither can prosper for long at the expense of the other. Stability, good wages and good working conditions form a common objective for enlightened labor and enlightened management, but the objective can be reached only through team-work. Team-work is the force that carries us forward, for it calls on each individual to do his part and respect fully the rights of others and to work for the common good. The solution then rests in how to work together in that spirit. What are the rights and responsibilities of the three factors if the interests of all are to be in balance?

The Consumer pays the bills of business for Labor, for materials, for management and for profits. Therefore he creates employment and decides, when he determines how much he can and will pay for goods and service, how much Capital and Labor will receive for their production and distribution.

The Laborer's Capital

Labor, like natural resources, is primary and comes before Capital. Labor risks its life, the work of its hand and brain. Its investment helps a business to grow, and if it prospers its reward should increase, for rewards should be in reasonable proportion to its investment. But the laborer, to be fair, must keep in mind that Capital represents the labor and savings of others, and often, indirectly, his own. If Capital is to be used in connection with his labor to serve the public better and bring greater rewards he should be interested in seeing that those who furnish the Capital are given fair treatment for its use.

Capital is invested when there appears to be opportunity for it to earn a fair return, for our economic system lives on profit, and when it is invested it provides the means by which Labor may pursue its first aim of improved earnings and improved working conditions.

There is no class of our society which should be more interested and has more at stake than Labor in the orderly processes of law and order, upon which the foundations of our Constitution rest. Yet there have been too many instances of a disregard by irresponsible leaders of Labor for those orderly processes. Labor has acquired vast power, and with that power there is an obligation of great responsibility. For many years Capital was selfish, bold and domineering. Its policy was to have and to hold power and to grasp for more. Its strength was so great, its prestige so vaunted, its arrogance so strong, as to make it appear that plutocratic wealth reputed itself to be invulnerable to attack from any source whatever. But the mighty have fallen. Legislation has effectively checked the possibility of predatory raids, and with it has come a realization by Capital and management that all business must be conducted in the public interest, and with proper consideration for both human and property rights. It took many years of legislation and judicial proceeding to curb the irresponsible power of Capital.

In the railroad industry there has grown up over the years a number of

strong unions of employes, and for the most part, the leadership of those unions, while aggressive, has been statesmanlike and responsible. For that we can all be thankful. But labor on the railroads must be ever watchful to see that the power of its leadership does not become irresponsible. Railroad men have always been regarded as a high type of citizen. They have earned that regard and I am sure that they wish to enhance it. They must be on guard lest subversive groups infiltrate their ranks, acquire power, and lead them astray. It is not the American way—

to engage in sit-down strikes;
to engage in slow-down of productivity;
to defy court injunctions;
to engage in secondary picketing against industry and its employees who have no quarrel with each other;
for a labor organization to attempt to influence the foreign policy of our government by deciding that it will not handle goods destined to a certain country;
to levy a tribute upon traffic that comes by truck into the City of New York;
for a union leader to defy the President of the United States and tell his men to stay away from work when the mines are taken over by the government;
for the Mayor of New York City to be forced to ask the leader of teamsters to be merciful and save the people of New York City from starvation.

Yet those things have happened within recent years. I have no doubt that all classes of society in this country are anxious to continue what we know as our American way of life, with its freedoms that are denied to so many other peoples. If that be true, is it right that any man be forced to belong to a labor organization in order to acquire or hold a job?

Every man insists upon the right to select the kind of work in which he wishes to engage, to work for an employer for whom he wishes to work and to quit when he likes, for whatever may be his reason. We jealously guard his right to worship according to the dictates of his conscience; to vote as he chooses; and to join a labor organization free from coercion of management. If, as I think, these things are all very important to preserve, then in my opinion there is no justification for requiring that a man belong to a labor organization in order to exercise his right to support himself and his family.

No Closed Shops

In the railroad industry we have no closed shop organizations, and I hope the day never comes when the standard railroad labor organizations press for a closed shop. They have done very well without it, and many men in positions of leadership in railroad labor organizations have told me personally that there is no need for it and that the closed shop makes for irresponsible leadership and the exercise of irresponsible power. It has been proved that the closed shop is not necessary for the maintenance of strong labor organizations, and the railroad labor organizations are the best proof of that statement. Therefore, when I advocate the abolition of the closed shop, it is not with any intention that such abolition could be used by any interests who might be encouraged to think that it might tend to break up or weaken labor organizations. I am convinced that it would not be a detriment to labor organizations, but it would preserve for every man a freedom which is important to him in the pursuit of life, liberty and happiness. There is plenty of evidence that the closed shop or maintenance of union membership—which is practically the same thing—has caused more troubles within the ranks of labor than it has within the ranks of management.

Irresponsible power is dangerous and those in possession of it seldom wish to relinquish it. Labor has no more right to exert irresponsible power adversely to the interests of the public than has Capital; and Labor should recognize that it is at the crossroads where its leaders must decide either to use its power in the legitimate interests of Labor and without trespassing upon the interests of the public, or, if that power is exerted in an irresponsible manner, it will have to be taken in hand by the American people and curbed, just as was the power of Capital. There must be a balance, and that balance is a fine one. If it is preserved in the interests of Labor, Capital and the Consumer, all will thrive and prosper. If it is unbalanced by any one, or by any combination of two against the other, each will suffer; and if, as sometimes happens, chaos results, it can lead to civil war as it did in Spain.

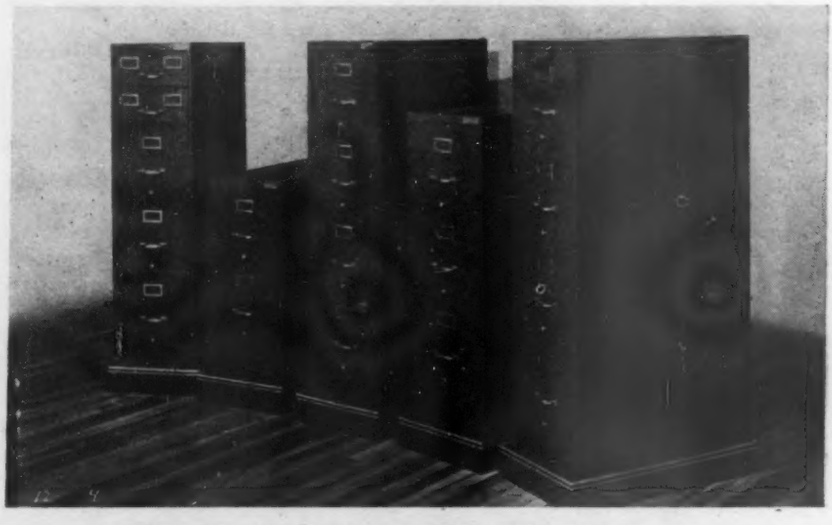
My plea therefore is for everyone in the matter of human relations to be guided by the Golden Rule, recognizing always the legitimate interest of your fellow-man and of each class of society; to have due respect for law and order; to preserve the precious heritage given us by the Constitution of the United States, and to conduct the affairs of our industrial life in balance as our political life is balanced by the Constitution.

New Lyon Filing Cabinets

A line of steel filing cabinets which incorporates several original features has been announced by Lyon Metal Products, Inc., 737 Clark street, Aurora, Ill. Available in eleven models, these cabinets of suspension or non-suspension types have drawer fronts with rounded corners added as a safety factor.

Cabinet drawers move on ball bearings and floating rollers, said to facilitate easy operation. Two double stops, one of which is set in the cabinet drawer and the other in its carrier, are designed to prevent the possibility of these drawers being accidentally pulled out or dropped.

Conservation of filing space is attained by the use of non-wobble follow-blocks which move the full length of each of the drawers. Setting of the cabinet drawers at a 3/8 in. pitch to the rear is claimed to eliminate rebound and to facilitate keeping them closed.



Lyon file cabinets are adaptable to a variety of requirements and lend a modern appearance to offices

General view of north end of Diesel shop at Mechanicville as seen from the top of the new 675,000-gal. fuel oil tank

Converts Shop for Diesel Repairs

AN interesting example of a back shop converted into a modern facility for the servicing and repair of Diesel-electric locomotives is the new Diesel shop of the Boston & Maine at Mechanicville, N. Y., work on which was completed recently. Because this road will soon completely Dieselize its Fitchburg division (of which Mechanicville is the western terminus), it was decided to convert the Mechanicville locomotive back shop into a Diesel shop.

The converted shop possesses all the fundamentals required for efficient heavy repair and running maintenance work. It has full-length, well-lighted and well-drained inspection pits with a depressed floor between tracks, continuous elevated platforms at locomotive floor level; modern fueling, lubricating and oil-reclaiming facilities; overhead cranes, and ample provision for fire protection. It is not equipped, however, to change out complete Diesel engines, because the cranes are not large enough and there is insufficient overhead clearance. Also, electric motor and generator repairs are made by the manufacturer.

Mechanicville, one of the principal gateways for freight moving in and out of New England, is the major B. & M. interchange point with the Delaware & Hudson and the New York Central. At Troy, N. Y., only a few miles away, the B. & M. also interchanges with the New York Central. One of the most important main lines of the B. & M., therefore, extends between Mechanicville and Boston. Because of heavy grades and curves, this line is one of the most difficult on the railroad from an operating standpoint, and for this reason most of the new freight Diesels purchased by the road have been assigned to this territory.

Shop Location

By January, 1945, the B. & M. was maintaining 19 Diesel locomotives at Mechanicville, including twelve 5,400-hp. freight Diesels, five 1,000-hp. switchers and two 600-hp. switchers. In addition, it has had on order for early delivery three 2,700-hp. freight Diesel units; fifteen 1,350-hp. "A" cabs; sixteen 2,000-hp. passenger locomotives; three 1,000-hp. switchers; and four 600-hp. switchers, some of which are intended for use on the Fitchburg division. Of the freight Diesels now in service, one has been in almost continuous operation since October, 1943, and many of the switching Diesels have been in service much longer. To the present time the 12 freight Diesels have operated more than 2,400,000 "statistical miles." In view of this length of service, and the plan to Dieselize completely the Fitchburg division, it was considered necessary to establish a modern shop, large enough for future needs, which would be devoted specifically to the running maintenance and repair of this power.

The new Diesel maintenance and repair shop is located on the west side of the Mechanicville terminal a short distance north of the enginehouse, near the storehouse and office building at that point. It has four tracks entering at the north end, of which two are through tracks. These tracks are numbered 1, 2, 3 and 4, from east to west.

Immediately north of the shop are fueling facilities and a washing platform. The storehouse is located east of the shop, and between the two buildings is a track which is used primarily for unloading materials at the storehouse. The inbound and outbound running tracks skirt the storehouse on the east side and connect with the shop lead some distance north of the washing platform. Outbound locomotives on Tracks 1 and 2 in the shop, which are the through tracks, can also leave the shop at the

Boston & Maine alters existing building at Mechanicville, N. Y., to provide modern facilities for running maintenance and repair of this type of power

Night view of the shop, which indicates the careful attention that was given to adequate artificial illumination

south end, if other locomotives are waiting to be moved into the shop from the north. A stub track from the north extends along the west side of the building and is depressed at the end. This track, called the unloading track, has facilities for unloading fuel oil and lubricating oil from tank cars, and the depressed portion is used for unloading car wheels and traction motors.

The shop building is a one-story structure with no basement. It is 200 ft. long by 170 ft. wide, except for two projections on the south end, one of which, located at the southwest corner, is used as a steam locomotive machine shop and is separated from the Diesel shop by a partition. The other was built at the ends of Tracks 1, 2 and 3 to allow the construction of pits long enough to service entire 5,400-hp. freight Diesels, and at the same time provide ground-level floor space within the building at both ends of the pits.

Of Brick and Steel

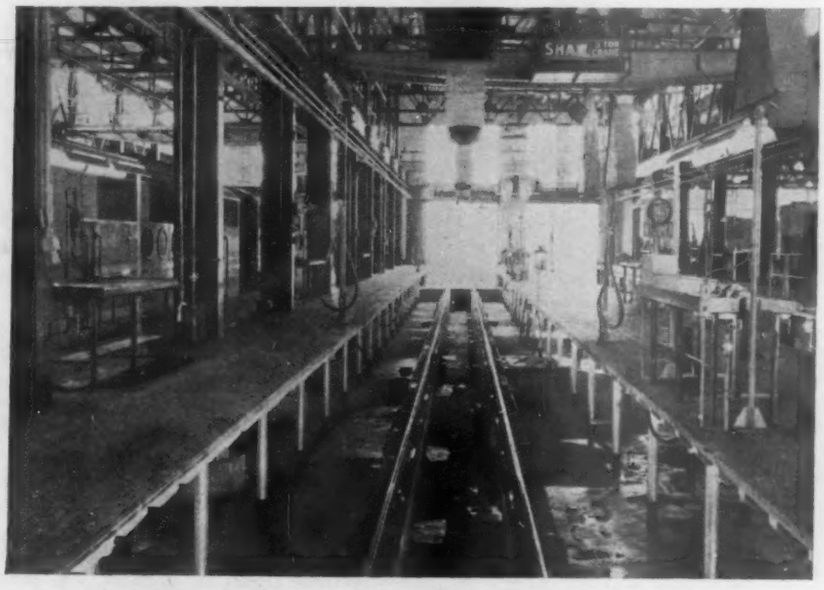
The building is of brick construction on a concrete foundation, with concrete floors and interior H-section steel columns supporting transverse steel roof trusses. Ample daylight illumination is supplied by large window areas with wood sash. The roof has a continuous high center clerestory bay extending from north to south, which is flanked on each side by lower bays, the high bay covering all of the track area within the shop. The roofs of the side bays are one-half story lower than the clerestory bay, the sides of which are enclosed with continuous hinged wood sash. The roof decks throughout are of frame construction, covered with built-up roofing.

The old shop had two overhead traveling 5-ton electric cranes, serving Tracks 1 and 2, and 3 and 4, respectively, which were retained. A third 5-ton crane was installed in the west bay for handling wheels, motors, etc. The shop was already equipped with an 8-ft. 50-ton Whiting drop table near the north end, in Tracks 3 and 4, which is so located that it serves admirably for changing out wheels or motors on the Diesels, since truck, wheel and motor work are handled at the south end of Track 4. A monorail crane, extending from the center of the west bay, through a new 12-ft. doorway in the west exterior wall, to the depressed unloading track, is used to load or unload wheels, motors, etc., from cars. In addition, two jib cranes were installed in the shop.

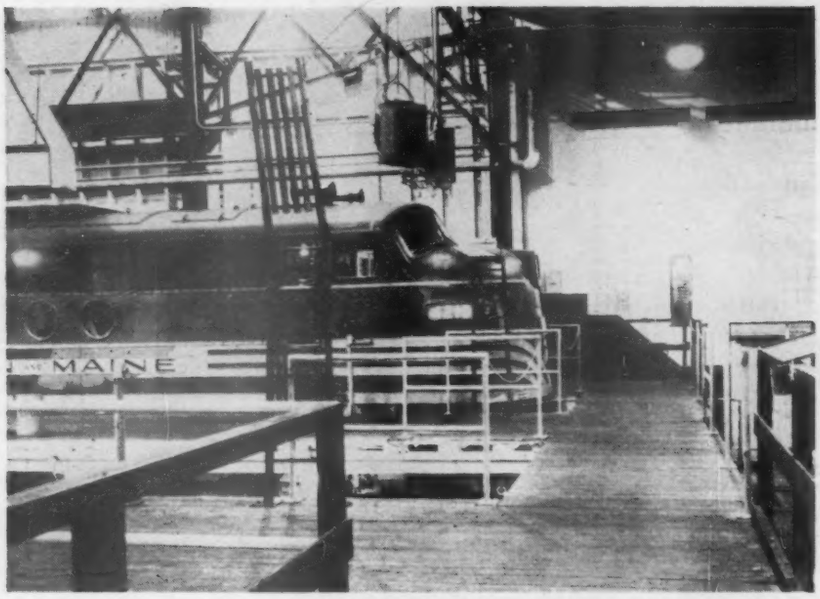
Alterations

A considerable amount of construction and alteration was required to convert this building into a Diesel shop. New pits were constructed for Tracks 1 and 2, and in part of Track 3 and the floor was depressed on both sides of Tracks 1 and 2, and between Tracks 2 and 3. To lengthen a short existing pit in Track 3 and to make the new pits in Tracks 1 and 2 long enough to accommodate an entire 5,400-hp. freight Diesel, and also provide floor area around both ends of the pits, a 22-ft. extension, 70 ft. wide, was constructed at the south end for Tracks 1, 2 and 3. In addition, partitions were necessary for various new service rooms built within the east and west bays of the building. These partitions were constructed of brick to an elevation 12 ft. 8 in. above the main floor, and above this level they are of 3-in. by 6-in. studs faced with Transite sheets. Two wide doorways for trucking materials in and out of the shop were added in the side walls, one in each side near the center.

Alterations to two other buildings were also required. To permit a south exit for Track 1, the west wall of a two-story brick building at the southeast



Looking north within the shop from the drawbridge platform spanning Track 3. Note the platform work benches, delivery stands for clean lube oil, smoke jacks and overhead crane



Above—Showing the drawbridge platform sections in place at the south ends of Tracks 1 and 2. Note the unit heaters above the locomotive

Below—The "dirty" room has two monorail cranes, exhaust hoods over the cleaning tanks and filter washing tanks, and two oven driers

corner of the shop had to be moved to the east, or inward, about six feet. In addition, a 50-ft. by 50-ft. extension was constructed on the north end of the storehouse to furnish sufficient space for parts for both Diesel and steam repairs.

Three Working Levels

This shop has three working levels; elevated platforms serving Tracks 1, 2 and 3, with depressed floors immediately beneath, and the old ground-level floor in the remainder of the shop, except in certain service rooms which have floors level with the elevated platforms. Running maintenance is handled on Tracks 1 and 2, with their new, full-length pits, flanked on both sides by depressed floors and elevated platforms.

The pits of Tracks 1 and 2 are each 4 ft. deep (from top of rail), 4 ft. wide and 210 ft. long. The floor level on both sides of Tracks 1 and 2, and between Tracks 2 and 3, is 30 in. below top of rail, and a new pit, 146 ft. long, was constructed south of the drop pit in Track 3. The old shallow pits in the remainder of Track 3 and in Track 4 were not altered. The walls of all the new pits are capped with 8-in. by 12-in. creosoted timbers bolted to the concrete, and the rails are mounted on standard tie plates and spiked to the timbers with cut spikes. Pits 3 and 4 have jacking pads for the use of jacking blocks and power jacks.

The floor in each of the new pits slopes gently towards a drainage gutter along one side, which is covered with plank and pitched to a series of four-inch cast iron drain pipes 64 ft. apart. Adequate drainage is also provided for the depressed floor areas. All drainage passes through an oil separator located in a sump, from which it is pumped into a nearby storm sewer.

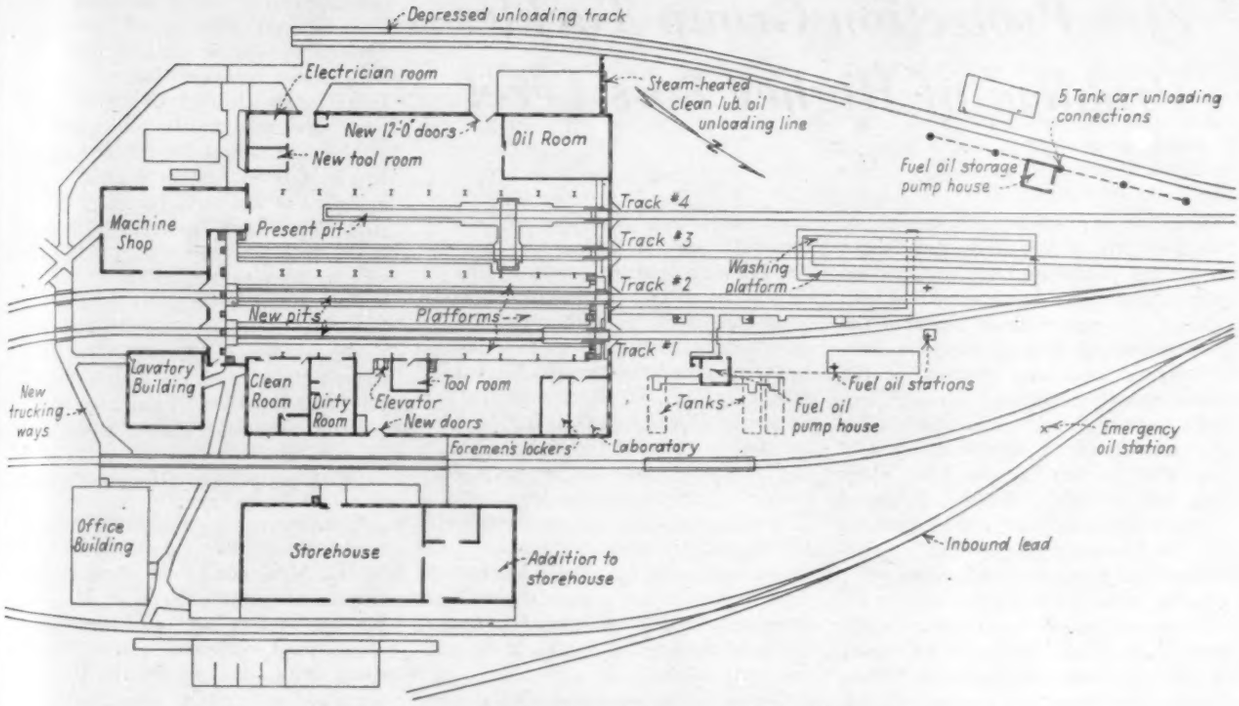
Elevated Platforms

The elevated platforms are supported on old boiler flues, and the decks, which are of timber construction, are 7 ft. above the level of the depressed floor, or 4½ ft. above the top of rail, providing an upper working level at the height of locomotive floors. All three platforms are 198 ft. long; the one along the east side of Track 1 is 7 ft. wide; the one between Tracks 1 and 2 is 9 ft. wide; and the third, between Tracks 2 and 3, is 13 ft. wide from the south end up to the drop pit, and 7 ft. wide from that point to the north end. Steel work benches are located at intervals on each platform, enabling the men to have tools and to work close by the cab and engineroom entrances to the Diesels being serviced.

An interesting feature of the elevated platforms is the provision of drawbridges at the south end of the building across Tracks 1 and 2, which, when lowered, connect all three platforms for continuous movement at the high level. A jib crane is used to lift the drawbridges when it is desired to move locomotives out through the south-end doorways.

All three platforms have convenient service outlets or connections for clean lubricating oil, dirty lubricating oil, hot and cold water, distilled water, steam and compressed air. These lines are suspended from the under side of the elevated platforms, except the dirty lubricating oil lines, which are attached to the outer sides of the concrete track pits. The dirty oil lines are 2½ in. in diameter and have 1½-in. hose connections. The clean lubricating oil lines are also 2½ in. in diameter, but are connected to 2-in. vertical dispensing stands, which extend 6 ft. above the platform level and have valved hose outlets. All clean lubricating oil delivered to each platform line is metered.

The clean oil delivery lines are in-



General layout plan of the new Diesel shop and servicing facilities at Mechanicville, N. Y.

sulated and the oil in both the storage tanks and delivery lines is heated, if necessary. Heating in the storage tanks is by means of steam coils, while heating in the delivery lines is effected by means of a low-voltage thermal line-heating system. An interesting sidelight in connection with the installation of this line heating system is that its operation caused interference with tests of the inductive-type cab signals with which the locomotives are equipped. To overcome this, a hook-up was devised to cut off the line heating system when the train control equipment was being tested. The steam, hot water and distilled water lines are also insulated.

Access to the different levels in the shop is by means of stairs, while access to the platform on the east side of Track 1 may also be had by means of a push-button type electric elevator opposite the exterior doorway on that side of the building, facing the storehouse. By means of the elevator, and the use of the platform drawbridges, heavy materials can be raised and trucked to any of the platforms. In addition, a new concrete truckingway was constructed from the storehouse, around the south end of the shop, to the new 12-ft. doorway in the west side.

The special service rooms and areas, as mentioned previously, are located in the bays at each side of the central track section of the shop. As shown in the accompanying general plan, these include a new building-maintenance tool room; an electricians' room, which contains battery-charging equipment; an oil room; a wheel and motor storage area; a testing laboratory completely equipped for making all necessary tests, principally of oil and water; a foreman's locker room; a "clean" room; a "dirty" room; and a shop tool room. The latter three rooms are entered from the east platform along Track 1 and have floors level with that platform.

The "clean" room, 34 ft. by 40 ft., is located in the southeast corner of the shop and has a small office in one corner with glazed partitions. This room, which is used principally for the repair and assembly of cleaned parts taken from locomotives, is equipped with a jib crane, a lathe, a drill press, a magnaflux machine, an arc-welding machine and steel work tables. The arc-welding machine is portable and outlets have been provided so that it can be used almost anywhere in the shop.

"Clean" and "Dirty" Rooms

The "dirty" room, where dirty locomotive parts are cleaned, is immediately adjacent to the "clean" room on the north, and is 24 ft. wide by 40 ft. long. This room is fitted with cleaning tanks and a rinse booth for engine parts; filter washing tanks and filter oven dryers; and steam equipment for cleaning the fuel and lubricating oil filter cases. It is also equipped with two monorails for the handling of filters and parts during the cleaning process, and with ventilating hoods over the cleaning and rinsing tanks, which are exhausted through the roof. The concrete floors in both the "clean" and "dirty" rooms were given a granolithic finish and a 14-in. floor drain was furnished in the latter. The cleaning and washing tanks drain into a 200-gal. per min. oil separator located in a pit adjacent to the dirty room.

The oil room, 33 ft. by 58 ft., located in the northwest corner of the building, has a compact and efficient arrangement of tanks, pumps, piping and controls for clean, dirty and reclaimed lubricating oil. It also contains the oil purification and water distilling apparatus. The oil reclaiming equipment consists of a Youngstown-Miller Model A-75 oil purifier, which operates on a batch filtration system (75 gal. to the batch). After reclaiming, and before the oil is pumped into the reclaimed oil tank, it is held in three 110-gal. batch tanks until it can be checked in the laboratory. The pumps involved in the lubricating oil handling and distributing systems are all motor-driven and are remotely controlled by switches located above and below the elevated platforms in the shop.

The water distilling equipment includes a 75-gal. per hr. capacity steam condensor with a motor-operated valve actuated by a float switch, and a 2,500-gal. wooden storage tank for distilled water. A 20-gal. per min. pump delivers the distilled water to the platform lines.

In addition to the exhaust systems installed in the "dirty" room, Tracks 1 and 2 are each equipped with four

(*Continued on page 722*)

Fire Protection Group Tackles Problem of Higher Loss Level

Talks on equipment and design of Diesel-electric locomotives and shops for greater protection from fire, and on the new hazards arising in transit of both old and new commodities, featured the third annual meeting of the Fire Protection and Insurance Section of the Association of American Railroads, held in Chicago on October 22 and 23. The first meeting of the section to be held since 1940, the session was attended by some one hundred railroad fire protection and insurance men and representatives of insurance concerns and manufacturers of protective equipment.

In his opening remarks Chairman W. F. Hickey, manager of insurance of the New York, New Haven & Hartford, stated that, while fire losses in all industries have been the greatest in history during the past war years, the relative increase in such losses on railroad properties was not as high as other industries. He attributed the superiority of the railroads' record to the fact that they have been organized for fire protection for over 30 years.

Railroad fire losses in the calendar year 1945 were about $7 million, or more than $2½ million less than the previous year—a reduction of more than 25 per cent. However, losses in 1944 were the highest in 20 years.

The chairman reported that subsequent to the annual meeting in 1940 the members of the F. P. & I Section were designated as the Railroad Section of the National Fire Protection Association, in a manner similar to the constitution of the Railroad Section of the National Safety Council, most of whose members are also members of the Safety Section, A. A. R. Although the standards of the National Fire Protection Association have ben applied on railroads for a number of years, this closer relationship between the F. P. & I. Section and the Association will insure an even more intensive application thereof.

In the absence of annual meetings during the past six years the section inaugurated regional meetings to minimize travel and hotel requirements. Notes reporting these meetings were published in a section news letter.

Fire Protection for Diesels

Recommendations with regard to the design and "housekeeping" of Diesel-electric road locomotives were presented to the membership by L. J. Molloy, superintendent of insurance of the Seaboard Air Line, and chairman of a special Diesel committee established by the section in 1945. These recommendations stem from a joint meeting of a subcommittee of the F. P. & I. Section and a subcommittee from the Mechanical Division, A. A. R. Regarding the protection of Diesel locomotives, Mr. Molloy's report took the form of a summary of the report made by the joint committee. Expressing the opinion that "Diesel locomotives are very vulnerable to fires—both inside and outside" and that the majority of railroad locomotives built to date do not possess design characteristics fundamental to fire protection, the joint meeting set forth specific criticisms as follows:

(1) Existing superstructures employing channeled inside frames have undesirable pockets at the bottom section of braces to posts and behind such fixed equipment as control cabinets, oil tanks and fuel pumps. The joint committee suggests that this defect be eliminated by applying a light inside lining of sheet metal, approximately 4 ft. high, with a top sloping about 45 deg.

(2) Compartments under the cab floors should be closed off with suitable doors or panels. If ventilation be necessary, the doors may be made of wire mesh.

(3) Suitable metal containers should be provided in the nose for fusees, torpedoes, flags, spare light bulbs, etc. Any equipment, such as frogs, chains and emergency knuckles, should be kept off the floor by suspension from suitable brackets.

(4) To prevent oil leakage in the engine room and subsequent saturation of the interior of the units, it is recommended that metal drip pans be provided under the engines with drains extending below the bottom edges of the water and fuel tanks.

(5) Pipes and conduits, whenever possible, should be a sufficient distance from the floor to permit thorough cleaning underneath.

(6) Avoid pockets underneath the locomotive where combustible matter—such as leaves and grass—can accumulate.

(7) Underneath equipment should be specifically designed for accessibility. Fuel tanks should be so located that they cannot be injured by flying objects which would puncture them.

The joint committee also formulated specifications for minimum fire protection apparatus to be installed on all Diesel-electric locomotives by the builders and included in the base price thereof. These recommendations were set forth in an abstract of committee reports presented at the annual meeting of the Mechanical Division, A. A. R., in Chicago on August 8 and 9, which appeared in *Railway Age* of August 17, page 266. It is understood that they were made the subject of a ballot letter sent to the members of the division.

Following a lively discussion, in which particular interest was shown in the extent of damage sustained by Diesel-electric locomotives involved in fires, the report of the Diesel committee was accepted by the F. P. & I. membership.

Old and New Commodities

The transportation hazards of old and new commodities were discussed by Dr. W. G. McKenna, chief chemist of the Bureau of Explosives, A. A. R. Pointing out that cellular residues, such as alfalfa meal, rock wool and rug foundations, while not inherently hazardous are made so by faults in processing, the speaker declared that processors should be persuaded to control moisture content so that it is uniform throughout the load. A satisfactory average moisture is not good enough, since a small amount of excessively dry product will set off combustion in the whole load. He also referred to fires resulting from the "hot loading" of such commodities coming from direct-fired dryers. Members of the bureau are now meeting with an association of processors to find a solution to the problem of hot loading. If the latter is not attained, the Interstate Commerce Commission may be asked to class such commodities as "dangerous," even though they are "safe as a load of sand" if properly processed.

Regarding new types of containers, Dr. McKenna asserted that the Bureau of Explosives is withholding approval until it is certain that the containers will stand up under reasonable conditions of transit. The bureau is also working closely with manufacturers of charcoal and has asked them to experiment with new processing methods with a view to decreasing fire hazards in the transportation of this commodity.

Pointing out that there was an alarming increase in the frequency of fires involving nitric acid in late 1944 and early 1945, the speaker reported that he had found that 90 per cent of such instances were caused by a substitute cushion under the carboys. The bureau was ultimately able to convince the manufacturers that these war-time cushions were hazardous, and new specifications have now been drawn up and are being observed by large producers of nitric acid.

In discussing new commodities, Dr.

McKenna pointed to high-strength peroxides as "bad actors". They "make nitric acid look like an amateur." These compounds are not stable and must be shipped in vented containers made of aluminum. They are new to the trade, being "war-babies," and suggestions for regulations for the movement thereof will be presented to the Interstate Commerce Commission on December 1. Certain types of peroxides will be barred from transit altogether.

The speaker touched briefly upon problems in connection with the movement of the new radio-active materials for which new regulations are now being prepared. While they will be made as simple and uniform as possible, these regulations, the speaker asserted, will seem absurd in many cases, but this is only because materials which throw off gamma-rays and neutrons are different from anything previously handled by the railroads. The speaker believed that the new radio-active materials will be treated as Class D poisons.

Diesel Shops

Criticism of the use of temporary facilities for the servicing of Diesel-electric locomotives and joint use of houses by steam and Diesel locomotives without sufficient separation of working zones was voiced by W. S. Wicker of the Great Northern, in an address entitled "Fire Protection of Diesel Shops". He set forth the following general suggestions for design and equipment:

(1) When only limited facilities are required, build a one-stall metal or corrugated asbestos building on a concrete foundation, with non-combustible lining and with an approved type heating system.

(2) In a joint shop, the minimum necessary protection requires separation of the Diesel from the steam section by a fire-resistant partition faced with gypsum or asbestos board, without openings.

(3) When roundhouses are used, approved firewalls should separate steam and Diesel sections, and the main walkway through buildings should be entirely cut off from the Diesel section by a covered or enclosed passage of fire-resistant material. If openings between the sections are provided, they should be fitted with fire doors.

(4) In the design of new Diesel servicing or overhaul shops, standard firewalls and fire doors should be considered for separation of the traction motor and electric shops, oil reclamation sections, filter cleaning rooms, dip tanks and impregnating vats, store houses, paint spray rooms and similar hazardous occupancies from the main building and from each other.

Warning that fire protection facilities installed as an afterthought are generally not satisfactory, Mr. Wicker listed the following as necessary equipment for the protection of Diesel servicing facilities:

(1) Install adequate outside water mains, with ample hydrants and accessories, when the building itself is constructed.

(2) If local water pressures are not sufficiently great to supply fog nozzle or foam systems, install supplementary fire pumps.

(3) Install inside risers with 1½-in. hose connections spaced at least every 75 ft. in each direction throughout the building. Each outlet should be equipped with 50 ft. of 1½-in. C. R. L. hose with fog nozzles or foam applicators.

(4) Provide a portable 20-lb. carbon dioxide extinguisher or dry-powder extinguisher of equal capacity for each 2,500 ft. of floor space.

(5) Give serious consideration to extinguishers of greater capacity, if local conditions and value of units serviced warrant.

(6) Give special consideration to provision of suitable fire protection appliances in service rooms used for cleaning and storing parts, repairing traction motors, reclaiming oils, and similar operations.

The speaker went on to suggest "some Diesel shop practices of a preventative nature" as follows:

(1) Prohibit smoking in Diesel locomotives and in all portions of buildings for servicing them, except main offices, locker rooms and lavatories.

(2) In any part of shop where welding is carried on, a 20-lb. carbon dioxide extinguisher should be kept immediately available to snuff out flash fires.

(3) Install no fueling hose inside building and perform all refueling outside.

(4) Maintain absolute cleanliness.

(5) Make plans for rapid removal of Diesel units and equipment in case of serious fire.

With regard to the latter point, Mr. Wicker expressed the opinion that turntables and transfer tables are an impediment to rapid removal of power units in burning buildings. He applauded what he termed "the general trend" toward the longitudinal shop with stub or through tracks, in which the smaller service rooms are separated from the main shop by firewalls.

Safety in Welding Operations

Discussing "Practical Oxy-Acetylene Welding Safety", J. I. Banash, consulting engineer of the International Acetylene Association, stated:

"Studies prove that fires occur largely in portable cutting operations; that is, cutting done during repair, alteration or demolition work, or in some intermittent use, and usually when the operation is not under the direct control of the foreman of the department where the work is being done. To stress the point again, we estimate that about 90 per cent of all fires that occur during welding and cutting occur while using portable equipment, and we further estimate that from 80 to 90 per cent of these fires occur during flame cutting, rather than welding. In these portable cutting operations, our studies make it obvious that some lack of knowledge, supervision or interest on the part of the operator has been largely responsible for the fires".

"Controlled Smoking"

During the course of a round-table discussion covering a number of specific topics of interest, led by W. E. Cathcart, chief fire inspector of the Pennsylvania, it was concluded that "controlled smoking" is greatly to be preferred over an indiscriminate—and often irrational—blanket order of "no smoking". Pointing out that the smoking habit has greatly increased in the past few years and that "no smoking" signs no longer obtain obedience in many railroad facilities, a number of members suggested that all sites on railroad property be carefully screened for the element of danger from smoking. Only those places in which smoking is dangerous should be placed "off limits" for smokers, and in such cases enforcement of the "no smoking" rule should be rigidly enforced by local supervisors. At such points, employees can easily be convinced of the relation of the rule to their own safety. And for their comfort, it is suggested that smoking facilities be provided in rest rooms, lunch rooms, etc., and that, perhaps, "breaks" should be provided in routine, morning and afternoon, during which smoking would be possible.

Liquefied Petroleum Gas

C. K. Hoch, inspector, fire and safety department of the Reading, in a paper on "Liquefied Petroleum Gas", pointed out that the use of this product has increased greatly in recent years, particularly for domestic use, and that strict rules for its handling must be adhered to; that consignees should be required to install gas storage tanks approved by underwriters and state bodies; that only cars of approved type should be used to haul the commodity; that unloading tracks should be grounded, insulated and bonded, and located at least 50 ft. from main line tracks, and that derails and stop signs for locomotives should be established at the end or ends of the unloading track.

Discussing "Gasoline Tractors in Freight Stations and Piers", Mr. Cathcart listed in detail the required characteristics of freight handling equipment from the fire protection standpoint. Only equipment approved by underwriters'

laboratories should be installed, he said, and these should have removable fuel tanks, equipped with supporting racks on the conveyor frame, and all fuel piping contained inside of the latter. Tanks should be protected against damage or puncture and the exhaust lines should be fitted with a suitable water muffler, condensing muffler, air-maize spark arrester or similar device. The engine should be hooded and all electric wiring clipped to prevent chafing. Screw connections, and not spring, or clip joints, should be fitted at the spark plugs. The speaker preferred the pump-type fuel-feed system, and metal, not glass filters.

Discussion of the paper brought out that a recent insurance survey showed that 60 per cent of fires on tractors occurred during fueling operations. Members agreed that such operations should be restricted to the open and carried out so as to prevent fuming.

Goods in Transit

Carlisle Needham, manager of insurance of the Southern, pointed out that, due to heavier loadings, increased traffic and increased value of commodities, losses from fires involving goods in transit are steadily increasing. An average freight train will contain many cars, the contents of each of which are valued as high as $100,000. Losses from fires in transit, he said, "may soon top the entire risk classification of railroad losses."

How About Matches?

F. Palin, insurance commissioner of the Canadian Pacific, attributed fires involving matches in transit to improper loading, rough switching and failure of shipper to bill the commodity properly. Discussion of his paper brought out the conclusion that many match fires are caused by loading in box cars with protruding or rough interiors, causing friction. Loading too close to the roof brought about the same result.

U. S. Attix, general fire inspector of the Southern Pacific, described the application of zone fireproof treatment with an asphaltic compound on exposed top surfaces of open-deck trestles and bridges in mountainous territory, which has greatly reduced fires resulting from molten brake-shoe splinters.

The section voted to give formal consideration to the issuance and nation-wide distribution of a periodical poster or bulletin on fire prevention, for posting in depots, shops and section tool houses, similar to the safety posters currently issued by the A. A. R. Remington Rand, Inc., exhibited a motion picture entitled "A Million Dollars a Day", showing installations for the safe-keeping of valuable company records.

Converts Shop for Diesel Repairs

(*Continued from page 719*)

rectangular Transite smoke jacks, each of which is exhausted by a 27-in. fan powered by a 1½-hp. motor. The exhaust fans are turned on and off by switches located at the platform level.

Originally, the building was heated by hot water radiation, largely through wall coils. Most of these coils were left in place, but they were supplemented by a number of new 1,340-cu. ft. per min. unit heaters. Large double unit heaters were installed overhead at the north end of the shop, between the doorways serving Tracks 1 and 2, and 3 and 4. Each of these double units has a capacity of 11,000 cu. ft. per min. and draws cold air from a point 7 ft. above the floor. These units are automatically controlled so that during the winter months they start pouring warm air into the shop when the doors are opened for the entrance of a locomotive.

The shop is plentifully supplied with overhead and special lighting. The high center bay has rows of 750-watt Holophane lights, spaced about 14 ft. apart, and the lights in each row are spaced about 20 ft. apart. Similarly, 500-watt Holophane lights are located overhead in the low-bay areas, with special arrangements in the various rooms. In addition, each work bench on the elevated platforms has two 40-watt fluorescent lights, 8 ft. long, and a plug outlet.

The areas under the platforms are illuminated by rows of 150-watt Appleton-type vapor-proof lights, with wire guards, spaced about nine feet apart along the edges of the platforms. Plug outlets are also provided beneath each platform at intervals of about 18 ft. Each of the new pits is equipped with 150-watt Benjamin vapor-proof lights, installed in recesses in the concrete walls. These are located about 11 ft. apart on each side, in a staggered arrangement. Plug outlets are located in the pits, about every 22 ft. Special care was taken to provide vapor-proof fixtures at all locations where a fire hazard might exist.

The Mechanicville terminal has a mobile Foamite fire-fighting outfit. In addition, an extensive overhead sprinkler system was installed throughout the shop and storehouse, and beneath the platforms in the shop, which is supplemented by an adequate number of standard fire hose outlets.

Nearly all Diesel locomotives handled at Mechanicville are sanded, refueled and washed before being brought into the shop. The new sanding facilities are located on the inbound running track about 2,000 ft. from the shop, near an existing sand drying plant, which also furnishes sand for steam locomotives. The dry sand is delivered from two 10-ton, overhead dry sand houses, mounted on steel superstructures which span the tracks. Sand is delivered to both sides of locomotives through lengths of 2-in. flexible hose, which hang alongside the sand tower supports when not in use. The average time required to take sand is 10 min. for a four-unit freight Diesel.

The fueling facilities and washing platforms, as mentioned previously, are located on the tracks approaching the shop from the north. The washing platforms, of which there are two, each equipped with Sellers washing equipment, are placed directly along each side of Track 3, 104 ft. from the shop. These platforms are of timber construction, supported on concrete pedestals, and are each 4 ft. wide and 124 ft. long. For night work, the platform areas are illuminated by five floodlights on each side, mounted on poles, which are supplemented by floodlights mounted on the north end of the shop room, which illuminate the entire servicing area.

Fueling Facilities

The fueling facilities consist of unloading outlets for five tank cars, pumps for the delivery of fuel oil to a new 675,000-gal. main storage tank or to three 18,000-gal. buried auxiliary fuel oil storage tanks, and other pumps for the delivery of the fuel to the locomotive fueling outlets.

There are six fueling outlets, five of which are so located that all of the units of a 5,400-hp. freight Diesel, on either Track 1 or 2, can be refueled simultaneously. Delivery to each of the fuel outlets is at the rate of 75 gal. per min., and the average time required to refuel a locomotive is about 10 min. The other fuel oil delivery outlet is located on the inbound running track and is used only in emergencies.

Fuel oil is delivered to locomotives through 3-in. pipe stands, 9½ ft. high, each equipped with a length of 2-in. flexible hose, fitted with a 2-in. double-disc Bowser delivery nozzle. Each delivery station has a fuel oil meter, which supplements a meter at the unloading station, which records the amount of oil pumped into the storage tanks. The Diesels at Mechanicville use about 23,000 gal. of fuel oil daily.

The shop was constructed under the general supervision of T. G. Sughrue, chief engineer of the Boston & Maine, and D. C. Reid, general superintendent motive power. J. P. Cronin, engineer of design, B. W. Guppy, engineer of structures, D. M. Burckett, electrical engineer, and E. K. Bloss, supervisor of Diesel maintenance and operation, collaborated on the plans and design, and J. F. Collins, division engineer, Greenfield, Mass., was in charge of construction.

Old Passenger Cars—Retire or Rebuild?

Practical discussion by a committee of engineers, maintenance men, car builders, and manufacturers of finishing materials of the factors affecting the decisions*

This committee report proposes a three-part program of rehabilitation for existing passenger cars to be retained in service, and formulates complete specifications for each part. Its study suggests a probable national program of complete modernization for 2,000 cars; partial modernization for 12,000 cars, and scheduled maintenance only for 19,000 cars to be retained in service five years or less.

THE life of passenger cars for through-line and major suburban service may be set at approximately 30 years. After that period consideration should be given to demoting them to service elsewhere. Toward making this decision the type of equipment, its condition and arrangement must play an important part.

Some cars will not be adapted for other use without involving a large cost for changing over, in which case complete destruction is the cheaper method. In a large number of cases, cars can be placed in branch-line service, or converted to wreck-train maintenance or other types of work equipment, making possible the elimination of older equipment which has completely outlived its usefulness. First consideration, however, should be given to using cars on branch or short lines, as most roads have a large number of these outlying runs on which older equipment is generally in use. It would be good policy to use the better cars for that service and relieve older cars if possible.

During a period of conversion, the trend of style and design changes so completely that retirement is sometimes a more economical method of meeting the issue than installing newer appointments and improvements. The other angle is remodeling and converting older cars to such a degree that they will include the modern features plus such improvements as the latest decorative and color schemes and floor designs.

Changes in Rebuilt Cars

When it has been determined that certain older conventional steel passenger cars are to be kept in service for use in the same trains with modern streamlined equipment, consideration must be given to certain body changes affecting the external general appearance. The monitor roofs and curved hoods on the conventional cars are outstanding offenders against modern streamlined appearance and such roofs become objectionable when mixed with new cars in a train. If new air conditioning is to be installed, new center ceilings to accommodate the air ducts are required in any case. The old roofs are usually in bad condition from rust and corrosion, so that, with comparatively little extra expense, new roofs of A. A. R. contour 13 ft. 6 in. from rail to top of carline can be applied extending straight to the ends of the car.

In some of the modernized cars existing windows have been removed and replaced with double-length windows. This involves major structural changes in the side frames and it is questionable whether there is sufficient gain in appearance to justify the expense. Double-glazed dehydrated or breather-type aluminum sash can be applied in the existing openings, providing satisfactory exterior appearance. If new seats are to be installed, these may be spaced at the preferred center-to-center location without maintaining any fixed relation to the windows; this does not present any serious difficulty from the standpoint of passenger vision. When changes are to be made in the toilet-room arrangement or in other interior appointments involving relocation of partitions, a few of the windows may necessarily have to be relocated.

Side skirts may be added or not, as desired. This feature will usually be desired if other cars are so equipped and of course all should be of uniform depth and contour. If skirts are added, folding vestibule steps may be indicated. However, the stationary steps detract very little from the appearance of the train and it is felt these can well be maintained.

In remodeling or modernizing older passenger cars which have not reached retirement requirements, consideration should be given to certain features in truck design, when old trucks are reused, to meet present-day operating conditions with safety. Serious thought should be given to the application of roller bearings. Proponents of roller bearings stress two advantages which they display over standard bearings, namely, decreased train resistance and decreased maintenance costs; to this could be added the elimination of a number of hot-box delays experienced with friction bearings.

Truck Changes

When the present trucks cannot be modernized economically and new trucks are to be used, certain features affecting the riding qualities of the modern truck should be considered, such as longer swing hangers, making use of springs of high static deflection with vertical snubbing shock absorbers or a combination of coil and elliptic springs. The new truck should be equipped with brake cylinder and clasp brakes, allowing additional room under the car for application of air conditioning equipment, etc.

On all passenger-carrying cars, the tendency is to apply a material which acts in the absorption of impact shocks or has a noise-deadening effect. This material can be applied under chafing plates on coupler carrier irons, on the end sill above the coupler shanks, coil spring seats, equalizer seats, journal boxes, under truck center plates, and other parts where metal contacts metal and where there is a tendency to create noise and vibration. A number of cars of the older type are now equipped with single-truck brake and LN air brakes; consideration should be given to the application of both clasp brakes and UC air-brake equipment.

To prevent corrosion and reduce maintenance of truck parts, arrangements should be made to deflect the drains from truck parts, the drainage from washstands, sinks, showers and hoppers.

The material used in manufacturing vestibule diaphragm face plates can be pressed-channel section instead of the solid forged rectangular bar. This will be much lighter in weight and allow easier application and removal from the car. It will also reduce wear on the lower side and upper buffer center stems. Diaphragm snubbers have been

* From a committee report presented on September 6 at the annual meeting of the Car Department Officers' Association held at Chicago.

used in a number of cases to eliminate noise on car platforms, one of the main sources of criticism.

The air conditioning system on a number of conventional passenger-carrying cars is either run down or obsolete. The trend of late years has been to put self-powered units on the cars to take care of refrigeration and battery charging. The advantages of these units are obvious but they really do no better job of air conditioning than steam jets, electric-powered units or ice conditioning systems.

Heat—Air Conditioning

Considerable rearrangement of existing parts under cars that have not been air conditioned is, of course, necessary when applying air conditioning equipment for the first time. This detail, however, is more or less easily worked out because of the underframe construction of the conventional car. It has ample strength, depth, and room between the outside of the center-sill girder and the outside edge of the car. More difficulties are encountered with replacing old air-conditioned equipment. Relocation of battery boxes and in some cases water tanks and air-brake equipment is necessary besides removal of existing equipment, and patching of the resultant mutilation.

To provide good air distribution, the trend in later years has been away from grills in ducts going down the center of the ceiling of the car or coming down in the wide wall between the windows. The use of perforated ceiling panels and specially designed ceiling air dischargers has been on the increase. These have been designed on a scientific basis and are available at the present time.

The manufacturers of these products, when provided with the prints of a floor plan of the car, have done the engineering, made the recommendations and when the equipment is installed, have balanced it by means of valves provided with the equipment. Their use has been quite satisfactory in all but very special cases.

When such devices are installed in a car, it is necessary to redesign the ceiling, in order not to present an unsightly interior appearance, with symetrical lines incorporating the lighting with the new distribution device. All of this is presented to the public in a beautiful interior appearance. The old monitor or clerestory ceiling is covered up and, from the interior, the car can not be told from a modern, streamlined, arch-roof car.

One of the most comforting improvements on passenger cars within the last decade and a half has been the cooling. Any reasonable expense for such improvement seems justified on a car that is of sound construction.

The heating of cars built years ago has been the old conventional type running along each side just above the floor line. Over the years, these pipes have been painted and repainted again and again until their radiating capacity is doubtful. In modernizing a conventional car, the least that can be done is to remove these pipes, renew them when corroded excessively, and remove all paint and repaint with a thin coat of dark heat-resistant paint.

A more modern idea is to replace the existing steam pipes with finned radiation, thereby cutting down the amount of pipe necessary and giving better heat radiation. The heating of a car is also aided by steam being introduced into the evaporator coils of the air conditioning evaporator.

Lighting of Cars

The lighting of cars has long been a controversial subject. Many studies by illumination engineers have been made and the trend of late seems to be toward the use of fluorescent tubes. This involves an alternator to supply alternating current to the fluorescent lighting system. Individual lights over the seats, passenger controlled, have in many cases been installed. Some of these are fluorescent, some of them spot incandescent. The latter seems to be the more satisfactory in that it provides spot lighting for each passenger. This enables a person in the seat next to the window to have the light off and not be disturbed by the passenger next to him having his light on. With the fluorescent type light two passengers occupying adjoining seats must have the light either on or off. Individual desires are not realized.

Cars not equipped with self-powered generating units, but with a generating unit driven from the axle, should have a battery of ample size, at least 500 amp. hr., which can be kept on charge while standing in terminals or depots. With a self-powered charging unit, battery charging is automatically provided. Center lighting should be of the type that is regulated for night time and evening travel to provide comfort for passengers wishing to sleep in coaches. Parlor car lighting is, of course, more or less a matter for the interior decorator. Individual lighting, however, should be more seriously considered for passenger appeal.

Old passenger cars, either coach or parlor, were provided with smoking rooms for the men at one end and a women's lavatory at the other. These two rooms took up much space in the car, reduced its seating capacity, and did not allow enough smoking space for the number of persons desiring to smoke. Nearly all railroads now permit smoking in the coaches or parlor cars without having to retire to the smoking room.

Rearrangement of coaches, with a large separate room with wash basins and vanity adjacent to the toilet room, has brought about favorable comment from passengers wherever it has been used. The seating capacity is appreciably reduced, but only because the old type bucket seats were replaced by newer reclining chairs requiring more room. The available floor space is practically the same.

Floor-plan rearrangement in nearly all cases has been necessary because of the introduction of the floor-type evaporator for the air conditioning system to give more capacity and easier maintenance than that obtained with the overhead type evaporator. These floor plan rearrangements have been accomplished, with the exception of a few cases, without reducing the seating capacity of the car and in a few cases it was possible to increase the seating capacity.

Color Schemes Important

The trend in interior colors in most cases is toward a variety of pastel and bright combinations, which are more pleasing to the eye than the old drab effects. However, in making this change, consideration should be given to serviceable colors, in other words, those of which the patrons will not tire and which will be lasting from a maintenance standpoint.

When we speak of color, we refer to more than merely the paint. The general color scheme includes seat coverings, floor coverings, window shades, lighting effects, and, of course, the finish as applied to the ceiling and side walls. Most of the car builders and major paint manufacturers have departments which may be consulted on problems connected with interior and exterior decoration.

It is desirable to hold the color schemes to a minimum for any group of cars. The paint finishing materials going on most new and old passenger train cars today are mainly rubbed effects or semi-gloss synthetic enamels on the interiors with a photo-volt glossmeter reading ranging from 50 deg. to 65 deg. From a practical standpoint, a degree of gloss approaching a reading of 75 deg. will assist materially in reducing maintenance and cleaning costs. We suggest that the most pleasing results may be obtained from pastel shades of the following colors: blue, yellow, tan, green and various combinations of these colors. Here again we wish to stress the necessity for obtaining competent advice in the selection of color schemes.

Inasmuch as most of the finishing materials used on passenger cars today are applied with a paint spray gun, the safety factor for the protection of the operator should be considered. For this reason we suggest that lead-free materials are obtainable to a great extent in most of the finishes applied by the use of a spray gun. The more elaborate the color schemes used, particularly where paint is involved, the greater the labor cost because of the masking operations and the necessity for stocking the various colors in small quantities. In adopting color schemes where any considerable number of cars are involved, it will facilitate the problem for the manufacturer of the finishing materials, as well as the paint shops, if the group of cars to be finished with any one color scheme is as large as possible. From the manufacturer's viewpoint on both cost and ease of handling, minimum quantities should be 100 gal. or more. Where the quantities are below 100 gal., it is usually necessary to charge a premium because of the costs involved in handling small batches.

Finishing Processes

In a great many instances the inside finish of wood in conventional type cars has been veneered with high grade wood, such as mahogany and walnut, with bleeding stains applied over them. When a synthetic system is to be applied over such surfaces, a check should be made to determine whether or not the stains used on such surfaces are of the bleeding type. In that event it is desirable to remove the old finish.

In any modernization program, we understand it is the intention of most railroads to amortize the cost over periods ranging from five to fifteen years. For this reason we suggest that, where cars are to be retained in service for a period not to exceed five years, the old finish be saved as far as possible and the new finish be applied over it, using a schedule of operations as follows: Clean old surfaces, both exterior and interior; sand as required and remove all loose paint; spot prime and putty as required; apply sealer ground coat of desired shade; apply two coats of enamel.

Where the cars are expected to be retained in service for ten years or more and a considerable amount of remodeling has been done, the old finish should be entirely removed both on the interior and exterior and the surfaces finished in the same manner as new equipment.

The best quality of finishing materials obtainable is at all times desirable because of the labor costs involved in securing a satisfactory finish. Usually the labor costs range from two to three times the costs of the finish materials, particularly where many masking and surfacing operations are involved.

The next step toward bringing older equipment up to a more modern effectiveness is the change of floor covering, which must be judged from the same standpoint as the interior painting; that is, a covering both pleasing in appearance and sturdy for lasting service. At present in a great many of our conventional cars, little thought has been given to floor covering of any other materials than subdued shades of floor paint or similar colored covering. Now, however, we find that brighter and pleasing floor combinations are being made from asbestos and linoleum floor tile, as well as colors in rubber covering.

The covering on seats and in some cases the seats themselves must undergo a change. In most cases, the older seats can be made to serve the purpose and be very presentable; the only provision necessary is the use of a more appropriate shade of plush covering, etc., to match the color scheme employed on the interior walls, ceiling and floor covering of these cars. We find that idea seems to be the use of numerous colors to blend with the variation in painting.

The curtains in cars must also undergo a change to perfect the arrangement on interiors in passenger equipment and toward this end patterned material is taking the place of the solid colors usually found in our older equipment.

Present Passenger Car Status

Just how many heavy conventional passenger cars may profitably be modernized and rebuilt is a question which individual railroads must answer in the light of their own particular operating conditions, traffic requirements and the age and condition of the particular cars in question. A large volume of new cars must be purchased at an early date to replace obsolete equipment which will have to be retired shortly. In addition to the new cars it will be necessary to modernize a substantial number of conventional cars in order to maintain the passenger traffic we now have.

A table has been prepared which shows the number of cars now in service in each age group; included in this tabulation are the cars now on order to be delivered during 1946. The most important fact is that almost half of the total number of cars in service today are over 27 years old. This means that these cars were built before 1919, or, since very little car construction was done during the war, most of these cars are 30 years old, dating back before World War I.

It is assumed, based upon past practices of the railroads, that the following will be the program: Complete modernization, 2,000 cars; partial modernization, 12,000 cars; scheduled maintenance only, 19,000 cars.

Specifications for Passenger Car Modernization Programs

COMPLETE MODERNIZATION

A

1—Application of roller bearings
2—Application of UC air-brake equipment
3—Shock-absorbing material in truck construction
4—Application of clasp brakes
5—Grinding of wheel treads
6—Redesigning of springing for easier riding

B

1—Removal of monitor roof and adoption of A.A.R. contour of 13 ft. 6 in. from rail to top of carline
2—Application of double glazed dehydrated or breather type aluminum sash with no change in window size
3—No addition of side skirts
4—No change in end construction

C

1—Application of air conditioning
2—Application of perforated ceiling air distribution
3—Design ceiling to present a symmetrical appearance and eliminate any trace of the old monitor or clerestory appearance
4—Application of finned radiation and zone heating
5—Application of fluorescent center lighting, and individual seat lighting
6—Application of ample battery power—at least 500 amp. hr.
7—Elimination of old type smoking rooms
8—Installation of larger toilets for men and women, including wash and dressing rooms
9—Arrange floor plan to utilize floor type evaporators for easier maintenance
10—Apply seats of modern design, reclining type, covered with pleasing upholstery

D

1—Sand blast or otherwise remove all exterior paint
2—Remove all interior varnish or paint
3—Prime with lead-free primer
4—Paint exterior with good quality, high-gloss paint, lead free, suitable for spraying
5—Paint interior with pastel shades at recommendation of railroad's interior decorator
6—Good quality of paint or varnish, or synthetics to be used in all applications

PARTIAL MODERNIZATION

A

1—No change in journal bearings
2—Reconditioning of present brake equipment
3—Building up, and refitting of present truck parts
4—Reconditioning of present brake rigging
5—Grinding of wheel treads
6—Redesigning of springing for easier riding

B

1—Repair of present roof structure to result in no leaks, squeaks or unsightly appearance
2—Sealing of all window sash, including renewal where necessary to achieve absence of rattling and non-leakage of air
3—No addition of side skirts
4—No change of end construction
5—Repair of defective side, end and roof sheets

Present Status of Railway Passenger Equipment

	Head end	Coaches	Sleepers	Other types	Totals
Modern lightweight cars	1,900	2,200	1,700	700	6,500
Modernized conventional cars	7,000	5,500	3,700	800	17,000
Other conventional cars	7,300	12,700	3,100	1,100	24,200
Totals	16,200	21,300	7,600	2,600	47,700
No. usable for 5 yr., maximum	16,200	8,600	4,500	1,500	30,800
No. usable for 7 yr., maximum	8,900	8,600	4,500	1,500	23,500
No. usable for 12 yr., maximum	1,900	2,200	1,700	700	6,500

C

1—Application of air conditioning
2—Application of perforated-ceiling air distribution, side panels, or approved air distributors
3—Application of ceiling design to eliminate appearance of old type monitor ceiling
4—Modernize lighting, using incandescent rather than fluorescent
5—Remove, clean thoroughly and replace heating system in kind
6—Application of ample battery power—at least 500 amp. hr.
7—Eliminate old type smoking rooms
8—Install larger toilets and wash rooms
9—Install floor type, rather than ceiling type evaporators
10—Refinish and reupholster present seats with pleasing upholstering

D

1—Spot glaze all exterior imperfections
2—Spot glaze all interior imperfections
3—Apply first coat of good quality paint
4—Apply finish coat of good quality paint
5—Interior to be painted with good quality pastel shade according to recommendation of decorator
6—Good quality of paints, varnishes or syntehetics to be used in all applications

FOR CARS TO BE USED FIVE YEARS OR LESS

A

1—No change in trucks except to repair in kind and grind wheel treads

B

1—Repair sides, roofs and ends in kind
2—Seal all windows, including sash and glass

C

1—Apply air conditioning
2—Lowest priced air distribution
3—No change in ceiling design other than necessary for application of air conditioning
4—Apply electric lighting—incandescent
5—Remove, clean thoroughly and replace heating in kind
6—Apply serviceable batteries
7—No change in interior arrangement
8—Install floor type evaporators
9—Recondition seats

It will be noted that no mention has been made of generators for any cars. On air conditioning systems employing self-powered units, an engine generator is also applied. Nearly all cars worthy of other than scheduled maintenance, are supplied with an axle generator.

There are three types of air conditioning, namely, electro-mechanical, steam-jet, and self-powered. The choice is reserved to the individual railroad, whose needs dictate the type to be used.

The choice of roller bearings is left to the individual railroad.

Grinding of wheel treads to concentricity contributes to good riding qualities regardless of truck design.

The removal of the monitor roof contributes to outside appearance, and reduces future maintenance.

Modern sash—viz., double breather, dehydrated, and other such designs—can be salvaged for other uses.

Side skirts, while improving appearance, add to maintenance costs.

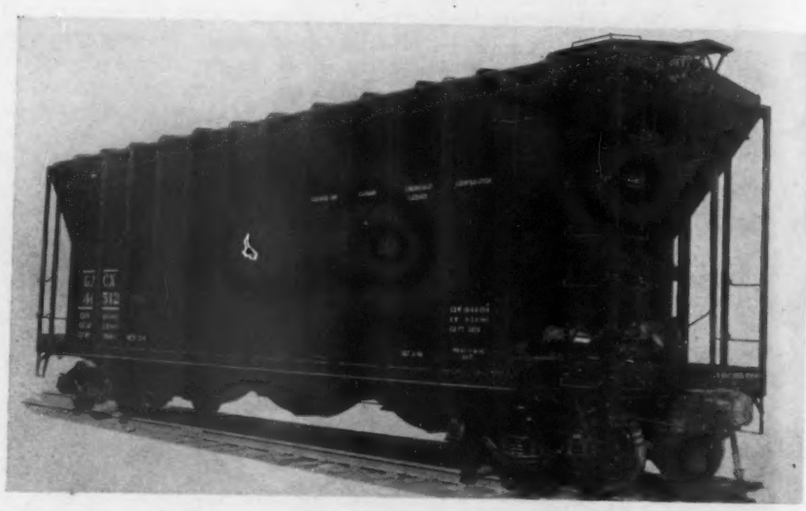
Old rigid steps should be retained.

The application of air conditioning is a *must*. All that is lost by air conditioning a car is the labor, as the material is salvageable. Air conditioning (cooling) produces more favorable passenger reaction during the months that travel is heaviest than any other improvement.

The use of quality paint is economy. It costs no more to apply than a poor-quality paint and the resultant better service and appearance far offset the additional cost of the quality material. This should be noted by the purchasing departments.

Your committee takes the stand that the conventional passenger car should be maintained as befits its condition rather than its age, its construction rather than its weight, and finally its cost of rehabilitation as against the cost of a new car. The foregoing recommendations illustrate its possibilities.

The report was prepared by a committee of which the following were members: W. C. Barrer, assistant superintendent car shops, Chicago & North Western, Chicago (chairman); L. A. McAllister, mechanical engineer, Alton, Chicago; A. W. Clarke, assistant general mechanical engineer, American Car and Foundry Company, St. Charles, Mo.; J. E. Candlin, Jr., assistant to chief engineer, Pullman-Standard Car Manufacturing Company, Chicago; E. L. Estes, district manager transportation, E. I. du Pont de Nemours & Co., Inc., Chicago; E. M. O'Brien, technical advisor, the Sherwin-Williams Company, Chicago; G. Coleman, vice-president, Williams-Hayward Varnish Company, Summit, Ill.; H. L. Holland, assistant mechanical engineer, Baltimore & Ohio, Baltimore, Md.; H. G. Moore, assistant superintendent car department, Atlantic Coast Line, Wilmington, N. C.



General American 50-ton covered hopper car, for the transportation of Vinylite

General American Covered Hopper

For handling powdered Vinylite in bulk for the Carbide and Carbon Chemicals Corporation, the General American Transportation Corporation has designed and built a 3,000-cu. ft. covered hopper car.

The transportation of powdered molding material in bulk is new and presents some problems that had to be met in the design of the car.

First, powdered plastics ready for molding must be protected from metallic contact. That was accomplished by the application of Amercoat primer, two coats of Amercoat enamel, and three coats of Amercoat grey seal.

Second, Vinylite does not lend itself readily to gravity unloading, and the hoppers were accordingly rounded so that a suction line introduced through the roof permits unloading without the necessity of putting a man into the car. All interior connections are welded so there are no ledges on which the material can gather.

Third, the maximum capacity obtainable within the clearance limit is a direct result of the weight of the product. To secure 3,000 cu. ft. and yet confine the length over strikers to less than 42 ft. meant increasing the height to 14 ft. 8⅜ in. and the width to 10 ft., 1⅞ in., both well within the clearance diagram and giving a workable center of gravity.

The light weight of the car is 56,600 lb. and the trucks have a nominal 50 tons capacity. The center sills are constructed from two 12-in. 35-lb. channels with a 12⅞-in. by ⅜-in. cover plate the full length. The side sheets are 5/16-in. C. B. steel, riveted to the side plate and welded to the side sill, stakes

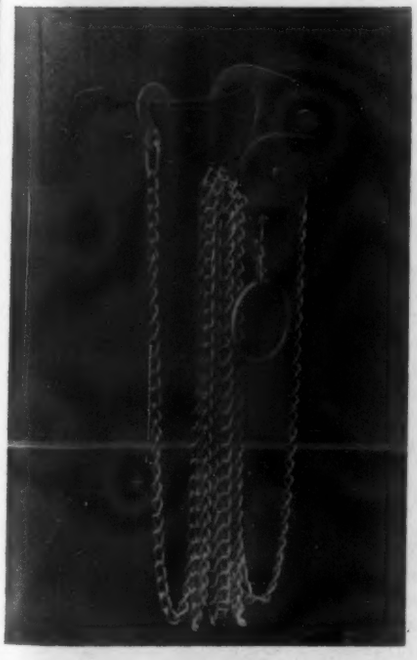
The loading doors and covers on the roof

and slope sheets. The roof sheets are 11-gauge C. B. steel, riveted to the side plates and welded to the carlines and together. The loading door frames are cast steel, 16 in. in diameter, welded to the roof. The loading door covers—10 per car—are malleable, hinged to the frame and secured with ⅞-in. diameter eye bolts.

Freight Car Door Opener

One man is said to be able to open or close the most obstinate freight-car door quickly and safely with the Monarch One-Man Car-Door Opener, a product of the Mining Safety Device Company, Bowerston, Ohio. It has been designed to eliminate the risk of mangled hands or other serious injury to personnel and to withstand rough handling.

The steel case encloses the locking pawl to eliminate interference with corrugated doors. The pawl is carefully hardened for long wear. Both the case and the pawl are of high-strength alloy steel. The welded steel chain is treated with a long-life galvanized finish.



The Monarch one-man car-door opener

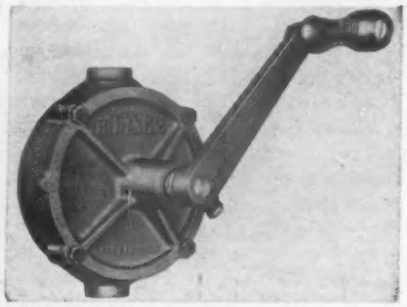
New open-face pallet model Transtacker high-lift tiering unit designed to handle 3,000 lb. loads

Automatic's New Transtacker

A motorized hand truck counterpart of fork lift and high-lift platform trucks has been developed recently by the Automatic Transportation Company, Chicago. It is the Transtacker, a battery-powered high-lift tiering unit which does the work of a fork lift or high-lift platform truck where weight, size, speed and cost make the larger units impractical.

The new Transtacker has an overall height of 83 in. and the lift mechanism is said to have all the advantages of regular fork lift trucks. It features a new hydraulic system, oversized pump and motor. Like other Automatic material handling units, the Transtacker operates with "finger-tip-control." Two buttons on the guide handle control forward and reverse power, while a third operates the lift. Horizontal speed and "dead man control" brake are controlled by vertical position of the guide handle.

The Transtacker is designed in four models for all types of pallet and skid platforms, and handles vertical tiering of unit loads in production and storage facilities where floor or elevator capacities are limited, where maneuverability is essential, and where volume of material or other conditions do not warrant the investment required for standard platform or fork trucks.



Sturdy construction adapts the Bowser pump to varied uses

Bowser Rotary Pump

A new rotary hand pump having a capacity of 10 gal. per min. at normal cranking speed has been developed by the Industrial Pump Division of Bowser, Inc., Fort Wayne, Ind. Of the vane type, the pump comprises an aluminum rotor, graphite carbon vanes, and stainless steel springs; its suction and discharge parts are threaded for ¾-in. iron pipe. Rustproof working parts are said to eliminate the freezing action of rust due to condensation within the casing when the pump is not used frequently.

The pump is available as "pump only," as a barrel pump with suction pipe, or as a complete refueling unit.

F. W. Green Made Cotton Belt Chief

Chief operating officer of the St. Louis Southwestern for 27 years succeeds Daniel Upthegrove as chief executive officer

Colonel Frederick W. Green

Colonel Frederick W. Green, who served as chief operating officer of the St. Louis-Southwestern for 27 years, was named chief executive officer of the railroad, effective October 16, succeeding the late Daniel Upthegrove, whose retirement was announced, and career described, in *Railway Age* of September 21, page 474, and whose death was reported in the issue of October 26. As chief executive officer, Colonel Green will be the active operating and executive head of the road, working directly under Berryman Henwood, trustee.

The Cotton Belt is a 1,600-mile railroad extending southwesterly from St. Louis, Mo., to the major cities of north and east Texas. It serves such important manufacturing and distributing centers as Memphis, Tenn.; Pine Bluff, Ark., and Little Rock; Shreveport, La.; Texarkana, Ark-Tex.; and Dallas, Tex., Ft. Worth, Tyler and Waco. By connections with the Southern Pacific, it provides through freight service between St. Louis and Memphis and Houston, Tex., Galveston and the Rio Grande valley, and between St. Louis and Memphis and San Antonio, Tex., El Paso and California points via Corsicana, Tex. Its "Blue Streak," fast overnight merchandise train from St. Louis to Pine Bluff is one of the first trains of this type placed in service, having been inaugurated in 1931.

The road's traffic is predominantly manufactures and miscellaneous, this accounting for 59.55 per cent of the total in 1945. Other commodity groups are products of mines, 20.78 per cent; products of agriculture, 11.9 per cent; products of forests, 7.04 per cent; with animals and animal products amounting to only 0.73 per cent. The road enjoys a substantial share in the Pacific Coast traffic, both of manufactured goods westward and perishable foods eastward. Likewise, there is a large movement of winter vegetables from the Rio Grande valley and other Texas origins over Cotton Belt rails. Although the road is almost entirely single track, its traffic density, measured in net ton-miles per mile of road per day, has in recent years been the highest of any line in the Southwest.

As Mr. Upthegrove's chief operating officer during his entire tenure of office as president, Colonel Green was directly responsible for carrying out the extensive roadway rehabilitation program of the late twenties and for the road's program of modernizing its locomotive roster.

Colonel Green has been chief operating officer through both the peak of the Cotton Belt's prosperity and the period of its lowest earnings in recent history, yet only once since 1922, in 1932 at the lowest point of the depression, has the operating ratio risen above 80 per cent, and in many years it has been below 70 per cent. During the recent war, heavy traffic, combined with continued rigid control of expenses, brought the operating ratio down to 47.86 per cent in 1942, 46.44 per cent in 1943, 45.77 per cent in 1944, and 57.35 per cent in 1945, one of the best performances achieved by any road of comparable size in the country.

Remarkable War Record

The war years provided a crucial test of the operating organization built by Colonel Green, a test that was met successfully without visible evidence of any strain on the organization. Because of its strategic location, the Cotton Belt became, even before the United States' entry into the war, one of the key railroads in the transportation of petroleum and its products from the East Texas-Louisiana oil fields to the eastern seaboard, and later in the war was a vital link in the westward flow of traffic supporting the various offensive operations in the Pacific theater of operations. In addition, large ordnance plants and military encampments located at several points on the line placed tremendous, and frequently unexpected, demands on the road.

During this period, one 50-mile section of single-track line successfully handled an average of more than 55 trains a day, with as many as 70 trains on some days, by the timetable and train-order method, supplemented by an automatic block system. Another exceptionally difficult 152-mile single-track subdivision had a train density approaching 40 trains a day, operating by the timetable and train-order system. Centralized traffic control has since been installed on both these segments of the line. In still another instance, a branch line which normally originated, through both interchange and local loadings, some 75 to 100 loads a day, suddenly began originating between 500 and 600 cars a day. The successful handling of such volumes of traffic by a railroad that is almost entirely single track is an operating achievement seldom matched, and is definite proof of Colonel Green's abilities as a railway operating officer.

Colonel Green was born in Rock Island, Ill., on April 30, 1877, and was educated in the primary and secondary schools of that city. In 1901 he became a trainmaster on the Great Northern, and in 1904, at the age of 27, he accepted a position as superintendent of the St. Louis, Iron Mountain and Southern (now Missouri Pacific) at Little Rock, Ark. After serving in that position until 1906, he was appointed general superintendent of the Louisiana & Arkansas. In 1911 he was promoted to general manager of the L. & A.

Colonel Green's accomplishments in that position won him considerable reputation, and in 1916 President F. H. Britton of the Cotton Belt made him his assistant. In 1917 Colonel Green left the road on furlough to serve with the Army. Entering the armed forces as a captain in command of an engineering company, he advanced to major, lieutenant colonel, superintendent of the Army Transportation Service at Brest and St. Nazaire, and finally to full colonel as commander of the First Grand Division, Transportation Corps. He was awarded the Distinguished Service Medal and the Legion d'Honneur (France) for his work during World War I.

Following his discharge from the Army, early in 1919, Colonel Green returned to the Cotton Belt in his former capacity and was advanced to vice-president (operations) and a director of the road and its subsidiaries later that year. His title was changed to chief operating officer in 1935.

Contract Rates on Government Traffic

Such charges resemble "agreed" rates applicable to commercial traffic in Britain and Canada—British railways have gone far in simplifying government charges

By G. LLOYD WILSON
Professor of Transportation & Public Utilities, University of Pennsylvania

A DEPARTURE in rate-making is provided by the Interstate Commerce Act, as amended, which enables the carriers, among other things, to carry, store, or handle property for the United States, state or municipal governments "at free or reduced rates," or to "transport persons free or at reduced rates" for local or state governments or the United States Government.[1] The same section of the Act permits carriers to establish special mileage, excursion and commutation fares, and joint interchangeable mileage tickets as well as to give reduced rates to ministers of religion, free passes to employees, and to certain other classes of persons, reduced or free transportation to certain classes of persons who are the subjects of charitable aid, and, when authorized to do so by appropriate orders of the Interstate Commerce Commission, to give reduced rates to provide relief in cases of calamitous visitation or disaster.

Carriers subject to Parts II, III and IV of the Interstate Commerce Act are authorized to make similar arrangements for transportation under reduced rates or provide free transportation under similar circumstances and conditions by corresponding sections of other parts of the Act.[2]

Section 22 Procedure

The procedure in making freight rates under the provisions of Section 22 of the Interstate Commerce Act as amended is very simple. Any individual carrier or individual carriers, through an individual person acting as agent for each carrier, may offer to any agency of government, authorized by Section 22 of the Act to receive transportation services at special contract rates, a quotation offering the transportation services at the rate or rates shown in the quotation. The rates or charges so quoted are not published in the form of tariffs nor are they available for use by other shippers or consignees nor, indeed, by other government agencies, but only to those to which the individual quotations are addressed or tendered. The carriers may, and often do, extend to several government agencies which ship or receive the same kinds of freight to or from the same points or territories the same special rates or charges as quoted to other government agencies.

The Section 22 quotations may be made by individual carriers or by groups of carriers acting individually through a common authorized agent. During World War II, the railroads made many Section 22 quotations to many different government agencies to provide special transportation charges for the movement of war traffic. Among the branches of the federal government to which special rates under Section 22 were quoted are:

War Department, Army Service Forces;
Navy Department;
United States Marine Corps;
United States Coast Guard;
United States Treasury Department,—Procurement Division;
United States Department of Agriculture, and its associated agencies including:
  War Food Administration,
  Community Credit Corporation,
  Federal Surplus Commodity Corporation,
  Food Distribution Administration, and
  Office of Budget and Financing;
United States Maritime Commission;
Reconstruction Finance Corporation, and its affiliated agencies, including:
  Metals Reserve Company,
  Rubber Reserve Company,
  Defense Plants Corporation, and
  Defense Supplies Corporation;
United States Commercial Company;
Foreign Economic Administration;
United States Forest Service;
War Relocation Authority;
American Red Cross; and
Victory Book Campaign

Up to November 9, 1945, a total of 683 Section 22 quotations were issued to government agencies through the office of A. F. Cleveland, the railroads' authorized agent. Because of changed conditions, 93 of the Section 22 quotations were reissued, and 1207 amendments were made in order to modify the original quotations to adapt them to new commodities, changes in or additions to the points at which shipments might be stopped-off in transit for storage, and otherwise to modify the quotations to meet changing conditions.

Content of Quotations

The Section 22 quotations made to the United States Government departments and agencies are issued in the form of a letter addressed individually or jointly to the departments offering the quotations to the government for and on behalf of the carriers which are parties to the quotations through their authorized agent. Many of these quotations were made by the carriers through A. F. Cleveland, vice-president, traffic, Association of American Railroads.

Typical Agreement

Some of the quotations cover line-haul freight rates, others special service arrangements and charges. Copies of the quotations are sent to the accounting and traffic officers of the carriers for the guidance of their respective departments in rating and billing the shipments and for accounting purposes.

A typical Section 22 Quotation made to a United States Government agency contains:

1. Statement of the traffic covered by the quotation;
2. Explanation of the services or privileges included in the quotation;
3. Rate or rates to be applied to the shipments;
4. Information or records to be supplied by the government representative to identify the shipments;
5. Effective date;
6. The termination date, or procedure and notice by which the arrangements can be cancelled;
7. Provision for retroactive application, in cases where such application is agreed upon;
8. A stipulation that land-grant deductions are not applicable with respect to the special rates;
9. A provision for the alternative application of the regularly published commercial tariff rates, if such rates less the land-grant rate reductions to which the government is entitled, are lower than the rates quoted under Section 22;
10. The applicability of charges and allowances provided for in the carriers' lawfully published and filed tariff; and
11. The regulations governing the payment of freight charges upon the shipments.

The quotations or agreements become effective when tendered to the government agencies by the authorized agent of the carriers, and when accepted by the government by signature of the authorized representative of the government agency to which the quotation is offered, or by making any shipments under the terms of the agreement. When accepted, the quotation constitutes an agreement or contract between the parties with respect to the transportation services covered. It does not, however, obligate the government agency to ship all or any part or any amount of traffic over the lines of the carrier or carriers making the quotation.

The quotations may be cancelled by written notice of not less than sixty days mailed by either party to the other,

[1] Interstate Commerce Act, Part I, Section 22.
[2] Ibid, Part II, Section 217 (6); Part III, Section 306 (c); and Part IV, Section 405 (c).

except as to shipments made from points of origin before the effective date of the notice and except as to any accrued rights and liabilities of either party under the quotations.

Section 22 quotations, as voluntary contracts made by the carriers for transportation services at less than the published rates or charges, have been used by government agencies in connection with traffic eligible to land-grant rate reductions as alternatives to the commercial or tariff rates less land-grant deductions. The government was entitled as a matter of law to receive the lower basis of rates,—either the rate made under a Section 22 quotation, or the commercial or published tariff rate less land-grant deduction, if the traffic was eligible to land-grant rates.

I. C. C. Attitude

Because they are private or special charges offered to agencies of government as voluntary concessions in rates or fares, Section 22 rate quotations are not published as tariffs. They are matters of carrier discretion. As such they apparently are not subject to review as to reasonableness or as to unjust discrimination, undue preference or prejudice by the Interstate Commerce Commission, provided the rates quoted under Section 22 do not exceed the level of rates which the Interstate Commerce Commission finds to be just and reasonable as published rates applicable to commercial traffic transported under similar circumstances and provided further that the level of the rates quoted under Section 22 are not otherwise in violation of the provisions of the Interstate Commerce Act applicable to the making of transportation charges. Since the quotations are voluntary the governments,—federal, state or municipal,—cannot compel the carriers to offer a Section 22 quotation nor dictate the terms upon which it is offered, although the government undoubtedly has the power to require the carriers to transport government traffic at fair and reasonable rates and charges.

Land-Grant Rates

Until the law abolishing land-grant rate reductions went into effect, the federal government could, with respect to traffic and passenger services entitled under the law to land-grant reductions in rates, either use Section 22 quotations or the published tariff rates less the land-grant reductions, whichever produced the lower basis of charges.

Although there is no decided law on the subject, an examination of the land-grant legislation and the Interstate Commerce Act leads one to believe that a government agency eligible to receive a Section 22 quotation and entitled also to land-grant deductions in rates could exercise some degree of control over the rates or fares so quoted through its power to attack before the Interstate Commerce Commission the published or commercial rates as unreasonable, unduly preferential or prejudicial, unjustly discriminatory, or otherwise in violation of the Interstate Commerce Act. If the tariff rate so attacked was found to be unlawful and ordered to be reduced, then the government was entitled, with respect to traffic subject to land-grant deductions, to the newly established tariff rate less the land-grant reduction. If this net rate was less than a rate established by Section 22 quotation, the government was entitled to use the lower rate. . The Section 22 quotation rate would then either be withdrawn or reduced at least to the level of the commercial rate less the land-grant deduction.

In a recent opinion of the Attorney General to the Bureau of the Budget, the opinion was expressed that there was nothing in Section 22 which deprives the United States Government of the protection afforded by other sections of the Interstate Commerce Act, and that there were no serious legal obstacles to proceedings instituted by the government for the recovery of alleged excessive transportation charges paid under Section 22 quotations, if the rates so paid were excessive or unreasonable. The opinion was also expressed that if the government challenges Section 22 quotations, the Interstate Commerce Commission, in the opinion of the Attorney General, has the power to determine what would have been a reasonable level of rates and charges for application to traffic moved by the government during the war period, although the Commission does not have the power to determine what would have been reasonable levels of Section 22 rates.

The opinion also advised that the government is not bound by the statute of limitations in connection with Section 22 quotations, unless Congress has clearly manifested its intention that the United States should be so bound, so that in his opinion the limitations upon the time for filing claims provided for in the Interstate Commerce Act would not be operative to bar claims or suits by the government.

Similar to "Agreed Rates"

It seems apparent that rates or fares made for agencies of federal, state or municipal governments are a species of "agreed" or contract rates, similar, in some respects, to the "agreed charges" made by British and Canadian railways. The points of similarity are that the arrangements in all cases are voluntary and concessions below the level of normal or commercial published rates. There is no similarity, however, in the procedure, and Section 22 rates are confined strictly to the agencies of government eligible to use such rates under the provisions of the Interstate Commerce Act. Section 22 rates are not available to commercial shippers or consignees, and may not be used as precedents for the establishment of commercial rates either on the same or higher bases. The Section 22 rates are not published but quoted only in the form of a letter, while agreed charges are published in special tariff publications. They do not obligate the shipper to any quantity or share of the traffic. The regulatory commission has no direct jurisdiction over Section 22 rates, but the Board of Railway Commissioners for Canada and the Railway Rates Tribunal in Britain have broad powers to regulate and modify agreed charges, under the conditions previously discussed.

Based on Averages

One group of Section 22 quotations comes nearest the pattern of "agreed rates." In 1945, the War Department and the Navy Department, through the Division of Rates of the Office of Defense Transportation, negotiated special rates under a Section 22 quotation from the Army-Navy consolidating stations in Chicago, New York, and Philadelphia, and later St. Louis, to Pacific Coast receiving depots. These rates were established on mixed merchandise traffic received at the consolidating stations for transportation in mixed carload lots. Prior to the establishment of the special Section 22 rates, this traffic was transported at the "bracket" rates applicable from the origin points to destination, the several bracket rates being applicable to various mixtures of freight. The Section 22 quotation was based approximately on the average of the rates paid for the transportation services under the bracket rates, subject to land-grant deductions. Either these rates made under Section 22 quotations or the published tariff "bracket" rates less land-grant deductions could be used, whichever gave the government the lower charges.

This arrangement gave the rail carriers the same revenues and the Army and Navy the same charges on the traffic, while avoiding the necessity of holding cars until a sufficient quantity of freight in each bracket was accumulated to make up a carload of freight eligible to that bracket rate and saving labor and clerical expenses in segregating the freight and segregating articles of different classes to fit them into the lowest available rate brackets to which they were eligible. The Army-Navy Consolidating Service and the carriers

were benefited by this arrangement by saving large expenditures for labor and clerical services without altering materially the revenues of the carriers or transportation charges paid by the War Department.

British Practice

The railways of Great Britain throughout World War II transported freight traffic for various government departments and for the British armed forces upon the basis of special freight rates and charges. At the outset of the war, individual shipments were paid for on the basis of the normal commercial freight rates applicable, either at standard or class rates or at "exceptional" (i. e., commodity) rates as the case might be, with the exception of certain traffic which was transported at special rates applicable to government or service traffic under the Cheap Trains Act of 1883.

With increased traffic and reduced personnel, it became imperative to reduce the amount of clerical work necessary to ascertain the correct charges to be assessed upon each consignment of freight and to arrange rates for new items of traffic which appeared as a result of the war. Accordingly, on June 1, 1941, a new arrangement was introduced under which freight traffic for the services or armed forces and the principal supply departments of the government of Great Britain was charged at the standard rates applicable, subject to a percentage reduction. The percentages deducted from the standard rates varied according to the groups in the British Railway Classification and were designed to reflect the lower exceptional or commodity rates which would be appropriate to part of the traffic in each such group.

Flat Rates

This change still did not produce the desired results and on October 1, 1941, steps were taken to insure greater savings in clerical work and time in order to conserve manpower. Under this arrangement freight traffic for the services and for the government supply departments was charged at flat rates per ton without regard to the classification of the freight or the distance transported. The shipments of each department are transported at a different flat rate applicable for all movements via all of the principal railways under government control. The rates cover the transportation service and certain incidental services. The flat rate for each government department is based upon the average charge per ton paid with respect to all of its railway freight traffic for the month of July, 1941. The present rates vary depending upon the types of traffic but the majority of these rates fall within 30 shillings to 40 shillings per ton of 2240 lb. Provision is made for the modification of the flat rates of each department from time to time to meet substantial changes in (1) the types of traffic; (2) the average length of haul; and (3) the method of consignment, that is, the type of equipment used and the quantities in which the freight was transported.

Additional flat rates are arranged for other government departments whenever it can be shown that the application of the flat rate would result in appreciable savings in manpower. These rates are based upon the composition of the traffic with respect to classification, consignment and distance for a month selected as representative.

Special Billing

Special billing is used to cover shipments moving at flat rates for the account of the British government services and departments, consisting of a combined consignment note, railway invoice and account. A monthly account is rendered by the railways to each department and the services by the central office of each railway company. This account shows the total tonnage transported, the flat rate applicable and the total charges.

Since the flat rates apply only to traffic transported for the services and government departments, traffic is transported for contractors at the public standard or exceptional rates. For this reason, contracts made by the services or government departments are made on a basis which transfers title to the goods to the government at the point of origin, such as an "ex works" or "free on rail" basis. The contractors selling goods to the government on this basis ship the goods on government account and the government pays the transportation charges on the basis of the flat rates. Contractors are supplied with copies of the special consignment note, mentioned above, for the billing of these shipments.

The flat rates were extended to merchandise traffic transported by passenger trains in the late months of 1942. These rates are applied to merchandise traffic not accompanied by attendants chargeable on the basis of weight. The flat rate for this service is based upon the freight charges paid on the traffic during a selected representative month. These flat rates are substantially higher than the freight or merchandise train traffic rates, although no data are available with respect to the level of these rates. A special form of combined consignment note, railway invoice and account is used in connection with flat rate traffic transported by passenger trains as in the case of ordinary government freight traffic.

The normal procedure used in determining liability and settlement of claims for loss and damage against the railways by British government departments and services are found, under war conditions, to involve too much clerical detail. The large increase in government freight traffic and the shortage of manpower were found to justify simplification in claim procedure. Most of the government departments have now adopted arrangements with the railways under which a percentage reduction is made from the monthly accounts paid by the government departments for freight charges. The railways pay this sum as an allowance each month instead of requiring the preparation and filing of individual claims for loss and damage. The amount of the claim allowance or reduction is based upon the amounts claimed by the government departments and admitted by the railways as claim liability during a selected representative period. This simplified method of handling claims was arranged by agreement between the railways and the government departments and services. Regulations seeking to prevent pilferage and poor handling of freight have not been relaxed.

Passenger Fares

Although not germane to the present discussion of freight charges, it is of interest to note that prior to the outbreak of World War II, commissioned and enlisted personnel of the services of Great Britain were transported at reduced fares by the railways when the traveling was performed at government expense as well as when the members of the services were on duty or on leave.

Early in 1941, average first class and third class single fares were established for the Army, Navy and Royal Air Force. These average fares were based on the fares actually paid by the government departments during selected representative periods of time. Warrants were issued to be exchanged for railway tickets at railway ticket offices. This procedure was found to cause delay and inconvenience and to be wasteful of manpower under war conditions. Consequently in August, 1942, a combined leave pass and railway ticket was devised for the use of service men traveling on leave at government expense. The ticket portion of this leave pass and railway ticket consisted of two slips, one for the outward portion of the trip and the other for the return portion. The use of the travel warrant as a railway ticket was extended to the personnel of the services when traveling on duty. Two warrants are issued, one for the going portion of the journey and one for the return portion. Payment is made by the government to the railways upon the basis of the flat fare plus 10 per cent to cover non-collected warrants.

GENERAL NEWS

Railroad Ingenuity Needs Aid of Capital

Hungerford says cure for poor service is more adequate earnings

Clark Hungerford, vice-president, Operations and Maintenance section, Association of American Railroads, and J. Monroe Johnson, director of the Office of Defense Transportation, were the principal speakers at a joint luncheon of the National Association of Shippers Advisory Boards and the Traffic Club of St. Louis, held at the Jefferson hotel, St. Louis, Mo., on October 22, in conjunction with the annual meeting of the National Association of Shippers Advisory Boards, which was reported in last week's *Railway Age*.

Mr. Hungerford said: "Wars cannot be won without adequate and efficient transportation. It is now being forcefully demonstrated that adequate transportation is just as essential for the operations of peace. In the United States, the great bulk of this transportation is, and will continue to be, provided by the railroads. There is nothing in existence or in sight to take the place of trains on tracks as the major transportation agency for a continent so vast and so richly productive as ours. The railroads are the only form of transportation that can move anything, anywhere, anytime and for anybody, and do it at a low average transportation charge.

"Yet not so many years ago there were people who seemed to have the idea that in the future of America there was no large place for the railroads. It was the fashion in many circles to write off the railroads as being 'washed up'—through—and about to take their place alongside the stagecoach and the sidewheeler of another day. Newer forms of transport were absorbing popular interest. The airway, the highway and the waterway were receiving public acclaim and assistance. Then came the test of the Second World War and the realization that despite all that had been done by other forms of transportation and for all their fine service there was nothing which could do for this country what its railroads could.

Tribute to Shippers—"Even in the fall of 1939, when war broke out in Europe, there was much apprehension as to whether the railroads would be able to meet the nation's transportation demands. But with the fine cooperation of the shippers and receivers of freight, especially of the 13 regional Shippers Advisory Boards and the national association of these boards, together with the understanding and cooperation of responsible government agencies, the situation was met.

"With the end of the war came a change in the type of traffic. While ton-miles have decreased during the months of 1946, there has been no corresponding decrease in the demand for freight cars. Instead, the demand for certain types of equipment, notably box and open top cars, is greater than it was during the war. Consequently, we find ourselves for the first time in more than 20 years with a shortage of cars to meet daily loading needs.

"This shortage is sometimes described as the 'worst' we have ever had. Of course, this isn't true. Perhaps the reason the present shortage looks so serious to us is that we have had nothing of the sort in such a long time. Actually, taking the country over as an average, more than 90 per cent of the freight cars ordered are being placed for loading."

Mr. Hungerford listed the following possibilities for improvement in the freight car situation: Construction of new cars, reduction in the number of unserviceable cars, and greater use of the cars now in existence. Concerning the latter, he declared:

"It is not a question of waiting until there are more cars or of waiting until the traffic subsides. It is a question of better use of what we have now. The Shippers Advisory Boards and their national association are based on the sound and workable idea that both the railroads and the shippers have a part to play in the production of transportation. Both of them have a responsibility for the way in which freight cars are used.

Basis of Improvement—"In asking for the continued cooperation of the shipping public, I am not unmindful of service failures on the part of railroads. We of the railroad industry have a definite responsibility to see that equipment of all types is handled and moved with maximum efficiency. No avoidable or unecessary car delay can have any place in present-day railroad operation.

"It is obvious that a tight freight car situation will prevail for many months at least. There will be many shortages and acute shortages, but there is nothing in sight of the sort we had during and after the First World War. Looking back to those years, it is not difficult to see what has brought about the difference. The existence and work of the Shippers Advisory Boards is one factor. Then there have been tremendous changes in the railroads themselves.

"Back of the progress which has made such things possible there was the faith to invest more than $13 billions in 25 years in building better railroads. Without such

(*Continued on page 735*)

Many Briefs Filed in Ex Parte No. 162

Commission gets viewpoints of government agencies, shippers, others

Approximately 80 briefs, representing the views of motor and water carriers, government agencies, individual shippers and shippers' groups, various state utility and railroad commissions and railroad security holders, among other interested parties, have been filed with the Interstate Commerce Commission in the Ex Parte No. 162 and the reopened Ex Parte No. 148 proceedings wherein the railroads are seeking commission authority to make a general increase of 25 per cent in freight rates with exceptions which would bring the average over-all advance down to an average of approximately 19 per cent, and continue in effect without expiration date the war-time increase of 10 per cent in passenger fares which was authorized in Ex Parte No. 148 and is scheduled to expire six months after the legal termination of the war. A condensation of the railroads' brief was reported in *Railway Age* of October 26, page 691.

No briefs were filed by the National Industrial Traffic League and the National Association of Railroad and Utility Commissioners, both of which, as noted in *Railway Age*, September 28, page 532, participated in the oral argument in the proceedings.

Advice From O. P. A.—According to a brief filed jointly by the Office of Price Administration and the Office of Economic Stabilization, the commission has "a new, affirmative duty of determining the lowest cost at which the sound railroads can successfully and adequately furnish their services" and "of setting the rate level on such a basis so as to produce the revenues to meet these costs, and no higher." The brief noted that "at least" a determination of costs, revenues and rates is "entirely feasible" in the proceedings and that such a determination is the "affirmative present statutory duty" of the I. C. C. It urged the commission to (1) scrap the present fair value rate base it has used in the past; (2) recognize the "lowest cost" mandate of Congress and (3) devise a method of fixing a proper return for the "normal" railroads.

The Southern Traffic League declared that "the commission should not permit the carriers to shift a load of $445,000,000 estimated passenger railway operating deficits onto the shoulders of freight shippers, while at the same time the railroads are proposing no additional increases in passenger fares."

Interpreting a forecast made by Spurgeon Bell, head transport economist of the I. C. C.'s Bureau of Transport Economics and Statistics, as showing that the railroads are not in dire financial distress, the league commented that "the railroads' estimates of revenues for the future are too low and do not take into consideration the great upsurge in freight car loadings or the fact that net railway operating income earned in the last half of the year normally greatly exceeds that earned in the first half." The league further asserted that it opposes any increase in rates under Ex Parte No. 162 over and above or in addition to those which resulted from the restoration of the increase in Ex Parte 148 on July 1.

Railroad Owners' Views—According to a brief submitted by the Railroad Security Owners Association, the commission should permit the railroads to make a readjustment of their freight rates in line with the higher level of wages and material costs in order to (1) prevent further injury to the credit of the railroad industry and (2) repair the harm that already has occurred.

"The investors are seriously disturbed," the brief noted. "The facts are simple. There is no dispute about them. The railroads have been compelled by conditions beyond their control to increase their costs by approximately 50 per cent to pay increased costs of operating and maintaining their properties. Even the rates sought are not sufficient to compensate them for their increased costs and provide a fair return. The failure to permit readjustment of rates in line with the higher level of material costs and wages is seriously and adversely affecting the credit standing of the railroad industry as a whole. There has already been a marked deterioration in railroad credit because of the inability of the carriers to adjust the compensation received for services in conformity with the increase in wages and other operating costs. If this deterioration is to be halted, and credit standing restored, very prompt action is essential."

The Southeastern Association of Railroad and Utility Commissioners, the views of which did not include those of the Virginia Corporation Commission, said that the only way that the I. C. C. can possibly hold the rate increases to the "minimum justified" is by "providing for a lesser increase to the railroads in the South than to those in the East," adding that such increases should be held to an "absolute minimum" for each territory involved.

"While the association realizes the purpose for which the additional 5 per cent was granted in official territory in Ex Parte No. 148, and fully agrees with the commission that it was justified on the record, the association also recognizes that this different rate of increase has other beneficial effects, chief among them being that it precludes the widening of the unlawful spread between official and southern rates," the brief observed.

Truckers' Usual Theme—The American Trucking Associations asked the commission to take "affirmative steps" to place the rail less-than-carload rates on a basis "where they will earn more than the cost of performing the service."

"This is a step that is long overdue and should not be delayed any longer," the motor carriers said. "We submit that the facts . . . amply support the conclusion that the solution of the l.c.l. traffic's plight is not a percentage increase in those rates, but an addition to those rates of a flat sum to cover the cost of pick-up and delivery service. Twenty cents has been shown to be at least the minimum average cost of performing this service, and, therefore, the commission should at this time increase the l.c.l. rates by 20 cents per 100 lb. It can and should delay to another date . . . a final determination as to whether the figure will be 20, 25 or 30 cents, but a step in this direction should be taken right now, and without further delay."

A. A. R. Member Road Meeting

The annual meeting of member roads of the Association of American Railroads will be held at the Biltmore Hotel, New York, on November 20. The session will be preceded on the 19th by a meeting of the A.A.R. board of directors.

B. & O. Releases New Movie on Nation's Capital

A two-reel motion picture showing dozens of the famous as well as some little kown beauty spots and historic sites and relics of the District of Columbia has just been released for free showings in schools, clubs and other groups by the Baltimore & Ohio. In addition, informative shots of the working methods of various departments such as the Bureau of Standards and the Department of Justice are included.

The 16 mm. sound film, entitled "Washington—Shrine of American Patriotism," runs 19 minutes. It may be obtained without charge by writing the Institute of Visual Training, 40 East 49th street, New York 17, which has been appointed distributing agent by the railroad.

300,000 Lb. of Tomatoes Used in Refrigerator Car Tests

Approximately 300,000 lb. of freshly picked California tomatoes, shipped last week by rail from Sacramento and Tracy, Calif., have arrived in Jersey City, N. J., thereby completing, according to the Association of American Railroads, the most comprehensive test ever conducted to determine the best method of handling such shipments in various types of refrigerator cars. The tests were conducted by the A. A. R. in conjunction with the Department of Agriculture and three refrigerator car companies, including the Pacific Fruit Express Company, the Burlington Refrigerator Express Company and the Fruit Growers Express Company.

According to the A. A. R., tomato growers pick their product green and seek to keep it that way or with only a touch of redness so that the tomato can ripen on dealer's stands. The purpose of the tests was to determine the kind and degree of ventilation that will assure tomatoes arriving at destination points in that condition.

Eleven different types of refrigerator cars were used in the tests, the inside temperature of each being controlled by ventilation instead of ice. Thermometers placed in 12 different locations in each car were connected with instruments on the car roof which electrically recorded any temperature variations. Throughout the 3,000-mile cross-country trip, research engineers who traveled on the same train with the shipment recorded at each stop en route variations in temperature as shown by the instruments. Upon arrival in Jersey City, the tomatoes were unloaded and examined to determine their condition.

The test was one of 10 which the A. A. R. and the Department of Agriculture have made this year to determine what improvements can be made in the construction and insulation of refrigerator cars and which type of car is best adapted to the movement of various kinds of fresh fruits and vegetables and other perishable freight.

L. & N. Gets Passenger Cars

The Louisville & Nashville accepted delivery on November 1 of the first of four postwar streamliners built by the American Car & Foundry Co. at its St. Charles, Mo., passenger car plant. The additional streamliners are well on the way towards completion and it is expected all four will be placed in regular service by the railroad during November. Each train will consist of four coaches, one dining car, one tavern-lounge and one coach-lounge.

Rail Improvements Hinge on Rate Increase—Johnston

The public and the government hold the key to the future of railroad transportation, whether it be the purchase of new cars and locomotives or the installation of new safety devices, C. E. Johnston, chairman of the Western Association of Railway Executives, said this week in Chicago.

"The railroads would like to install additional signal and train control systems, replace every piece of war-worn equipment, streamline every passenger train, reduce grades and curves, lay heavier rails, build new stations, and do many other things," said Mr. Johnston.

He declared that rates have been held at levels which do not yield sufficient returns for these purposes. Even during the war years the railroads earned only a little more than 4 per cent on their investment and were able to pay stockholders less than 3 per cent, he added. Prior to the war, rates were at levels which forced one-third of the nation's railway mileage into bankruptcy, he said.

"The railroads stand ready to give the public what it wants, but they have to look to the Interstate Commerce Commission for authority to establish rates that will enable them to do it."

The commission is now investigating the need for additional signal and train-control devices, he said, and he then gave the cost of installing these various systems as between $4,000 and $12,000 per mile.

He said that if the commission orders them installed on an extensive mileage, many railroads will be forced into bankruptcy unless further rate increases are authorized to provide the necessary money.

"Signal and control systems which expedite the movement of trains and afford additional protection against human failures will continue to be installed where needed just as rapidly as science perfects them and money is available to purchase them. The railroads are caught in the vise of rising costs and fixed rates, which can only be increased by authority of the Interstate Commerce Commission."

A. R. C. I. to Study Equipment and Loading Problems

The American Railway Car Institute has announced the formation of a research "team" of four engineers and transportation specialists to study railway equipment and car loading problems related to the efficiency of the nation's freight transportation services.

S. M. Felton, president of the institute, said the following four specialists have been retained by Palmer C. Putnam, the institute's consulting engineer, to serve as advisory aides: Frederick C. Lindvall, dean of engineering at the California Institute of Technology; Clyde C. Seney, senior staff engineer, of Booz, Allen and Hamilton, New York industrial engineers; Lawrence G. Hecker, design engineer, and George P. Baker, James J. Hill, Professor of Transportation at Harvard University and transportation consultant for railroads, as well as a member of the Transportation and Communications Commission of the United Nations.

Navy Donates Diesel Equipment to Cornell

Diesel engines and related equipment valued at more than $2,000,000 were transferred to Cornell university on October 24 as an outright gift from the Navy Department. Constituting one of the most complete Diesel engine installations in the United States, the equipment was accumulated during the war in the Diesel engine laboratory, where the Navy and the university gave more than 2,700 officers special training in Diesel engineering.

The equipment comprises a completely integrated installation adapted to professional instruction and research in the theory, operation, and maintenance of Diesel engines. The laboratory's 23 engines, the largest weighing 10 tons, range from 1 to 16 cylinders, generating from 15 to 1,700 brake horsepower, and represent about 15 different manufacturers of Diesel engines.

S. C. Hollister, dean of the college of engineering, in accepting the equipment stated that it can be used in several existing courses both in mechanical and electrical engineering, and will enable the college of engineering to organize new electives for undergraduates and graduates in Diesel engineering and allied fields. These courses will be of special interest to veterans. Instruction and research programs include the study of the design and construction of Diesel engines and engine auxiliaries; study of Diesel fuel injection systems including the design, operating characteristics and fuel phenomena; operation, testing performance characteristics, and maintenance of Diesel engines; and fuels and lubricants.

Freight Car Loadings

Loadings of revenue freight for the week ended October 26 totaled 942,257 cars, the Association of American Railroads announced on October 31. This was an increase of 10,491 cars, or 1.1 per cent, above the preceding week, an increase of 87,478 cars, or 10.2 per cent, above the corresponding week last year, and an increase of 25,772 cars, or 2.8 per cent, above the comparable 1944 week.

Loading of revenue freight for the week ended October 19 totaled 931,766 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, October 19			
District	1946	1945	1944
Eastern	177,327	141,169	165,902
Allegheny	192,797	147,518	194,293
Pocahontas	64,139	20,712	53,805
Southern	136,969	115,049	121,464
Northwestern	147,712	137,776	141,682
Central Western	149,872	147,335	150,420
Southwestern	62,950	64,248	79,439
Total Western Districts	360,534	349,359	370,541
Total All Roads	931,766	773,807	906,005
Commodities:			
Grain and grain products	50,237	59,732	56,724
Livestock	33,499	27,199	26,555
Coal	191,019	96,970	171,527
Coke	14,890	6,999	14,500
Forest products	48,503	37,019	42,565
Ore	62,839	62,327	67,046
Merchandise l.c.l.	130,355	114,416	108,053
Miscellaneous	400,624	369,145	418,955
October 19	931,766	773,807	906,005
October 12	899,443	754,559	898,720
October 5	906,848	768,040	877,035
September 28	916,483	832,509	912,627
September 21	899,053	837,293	897,883
Cumulative total, 42 weeks	33,156,654	34,310,505	35,427,825

In Canada.—Car loadings for the week ended October 19 totaled 76,338 cars, as compared with 85,178 cars for the previous week and 77,374 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
October 19, 1946	76,338	35,104
October 20, 1945	77,374	30,980
Cumulative totals for Canada:		
October 19, 1946	2,915,942	1,436,018
October 20, 1945	2,913,739	1,482,759

Medical Section, A. A. R., Meets for First Time Since 1941

Applicants for employment, returning veterans and long-time railroad employees are no longer fearful or suspicious of physical examinations, Dr. Mark L. Bishoff, chief surgeon of the Atchison, Topeka & Santa Fe, told members of the medical and surgical section, Association of American Railroads, at its twenty-sixth annual meeting in Chicago on October 28.

Dr. Bishoff, discussing "Attitude of Employees Toward Physical Examinations," said that not long ago job applicants were antagonistic to physical examinations, and that old timers were particular and modest. He reported that this attitude has now changed, which facilitates the doctor's work and makes an examination more accurate and beneficial.

The one-day meeting of the section, the first since 1941, considered various committee reports and heard discussions of medical problems. Chairman Arthur R. Metz, chief surgeon of the Chicago, Milwaukee, St. Paul & Pacific, presided. Newly elected officers are: Chairman, Dr. George P. Myers, medical director of the New York Central System, Detroit, Mich.; vice-chairman, Dr. Kenneth E. Dowd, chief medical officer of the Canadian National, Montreal, Que.

Michigan Central Completes 100 Years of Operation

Completion of 100 years of railroad operation was commemorated by the Michigan Central (part of the New York Central System) on October 24, at a banquet in Detroit, Mich., which also honored that road as the first to enter Chicago from the east.

The Michigan Central was formed through a charter drawn by Daniel Webster and approved by the Michigan legislature on March 28, 1846. In September, 1846, it took over the property of the Central Michigan, a line operated by the state from Detroit to Kalamazoo. This line was rehabilitated and completed to New Buffalo on Lake Michigan at the Indiana line in 1850. In May, 1852, the road entered Chicago through an extension and a contract with the Illinois Central.

Principal speaker at the centennial banquet was C. F. Kettering, vice-president of General Motors Corporation. Other speakers were: G. Metzman, president, New York Central System; J. L. McKee, vice-president; and C. L. Jellinghaus, vice-president.

New C. & E. I. Streamliner in Service November 8

The "Whippoorwill," a new Diesel-powered streamliner of the Chicago & Eastern Illinois, will be placed in daily service on a fast schedule between Chicago and Evansville, Ind., on November 10, following a brief exhibition tour of Illinois and Indiana cities along the train's route. The seven-car "Whippoorwill" is the second streamliner to be delivered to the C. & E. I. by the Pullman-Standard Car Manufacturing Company during the month of October, the first, the "Meadowlark," having gone into service between Chicago and southern Illinois points on October 6.

The "Whippoorwill" will be scheduled to leave Evansville, Ind., daily at 6:50 a.m., Vincennes at 7:56 am, Terre Haute at 8:55 a.m., and Danville, Ill., at 9:55 a.m. It will arrive in Chicago at 11:59 a.m. Southward the train will depart from Chicago at 5:20 p.m., Danville at 7:27 p.m., Terre Haute at 8:30 p.m., and Vincennes at 9:24 p.m., arriving in Evansville at 10:30 p.m. Eight additional stops will be made.

The train will consist of a combination car, four coaches, dining car and an ob-

servation-parlor-lounge car. The coaches will feature the new, reclining "Sleepy Hollow" chairs, while the diner is designed with the new diagonal seating arrangement of passengers.

The pre-inaugural exhibition tour will begin on November 2, at Clinton, Ind.; Terre Haute also will be included in that day's itinerary. Sullivan, Vincennes and Princeton will be visited the following day. On November 4, the train will be exhibited at Evansville, where dedication ceremonies will be held at 4:15 p.m. Employees of the C. & E. I. general shops and townspeople at Danville will inspect the train on November 5, after which it will be shown at Hoopestown, Milford and Watseka on November 6. The exhibition tour will continue on November 7 at Momence and Chicago Heights, and will be concluded by an all-day showing at Chicago's Dearborn station on November 8.

New Seaboard D. C. Offices

The Seaboard Air Line has announced the opening of new air-conditioned freight and passenger traffic offices in Washington, D. C., located in the Commonwealth building, 1625 K street, Northwest.

Effective Reservation System Employed by Air Line

Because a conveyor belt reservation system has increased by 300 per cent the capacity of United Air Lines' Chicago office for handling incoming reservations, the company has announced that the system will be adopted in all of its major reservation offices.

Key of the plan is a continuously-moving conveyor belt, with telephone sales positions on each side of the belt. Reservation cards are carried on the belt to the desired sections of the office, reducing movement of personnel to a minimum, the company said. An availability board, visible across one end of the office, provides available space 31 days in advance.

Sound-proof ceilings and substitution of lights for telephone bells have practically eliminated noise, the company states. It reports that the system has increased a sales agent's capacity from 5 to 10 calls an hour to as many as 20 calls each hour.

Mississippi Governor to Speak at Railway Editors' Meeting

Gov. Thomas L. Bailey of Mississippi will address the American Railway Magazine Editors Association at its meeting on November 14-15 at the Edgewater Gulf hotel, near Biloxi, Miss. The meeting will be attended by editorial representatives of the magazines and newspapers published by 39 railroads in the United States, Canada, Mexico and South Africa.

The association, observing its 25th anniversary this year, is said to be the oldest industrial editorial group in the nation. Some of its members with long-time publication records are: Erie, 42 years; Santa Fe, 40 years; Illinois Central, 35 years; Chicago, Milwaukee, St. Paul & Pacific, 34 years; and the Baltimore & Ohio, 32 years.

Also scheduled to speak is Robert Newcomb, of the Chicago firm of Newcomb & Sammons, industrial relations consultants. Other addresses and discussions will cover new editorial methods and policies, and appraise those of long standing.

Pennsylvania's Train Telephone System Nearly Complete

Installation of the first large scale, permanent system of train-to-train, locomotive-to-cabin car, and train-to-tower continuous telephone communication is nearing completion on the four-track main line of the Pennsylvania between Harrisburg, Pa., and Pittsburgh.

Including an earlier installation in New Jersey, the Pennsylvania now has the train telephone in 150 passenger locomotives, 131 freight locomotives, 100 cabin cars, and 16 wayside control towers, making a total of 397 units. Three hundred nineteen miles of line, including 1,056 miles of main track, are covered. All new locomotives on order for service on these main lines are to be equipped.

The railroad pointed out that, although several wayside stations and some locomotives and cabin cars remain to be equipped, the train telephone system is now in operation, on a 24-hour daily experimental basis, for the entire distance between Harrisburg and Pittsburgh. Begun more than two years ago, the installation project has been delayed by severe material shortages. Development of the system has been in collaboration with the Union Switch & Signal Company. The total cost to the railroad will be more than $1,000,000.

Railroad Ingenuity Needs Aid of Capital

(*Continued from page 732*)

railroads, what was done during the war could not have been done and victory for us and our allies would have been long delayed or even beyond achievement. Such things can be done again.

"There is no end to railroad progress in sight, and there never will be. We will see improvements in equipment and facilities and we will see new and better tools to work with. But to do everything the railroads will want to do to better their service and operations will take more than ingenuity. It will take the short of investment that has been made in the railroad plant during the past 25 years.

"All of us have learned that transportation rates do not truly measure real transportation costs. We have found that poor and inadequate transportation is costly, no matter how low a price at which it might be sold.

"The railroads are not content to stop where they are, nor does the shipping and traveling public want them to. Working together, we can go ahead to better and better transportation, produced at a lower real cost.

"The key to such transportation in the future is in the continued cooperation between and among railroads, between railroads and shippers, and in adequate and sufficient earnings. Adequate earnings can come only from rates which are related to present-day wages, prices and costs. Such earnings are in the interest of the shipping and traveling public, as well as of the railroads, and are in the interest of the vital needs of the nation and its people."

Praise for Kendall—In a few brief extemporaneous remarks, Colonel Johnson paid tribute to W. E. Kendall, chairman, Car Service division, A. A. R., asserting that "of all people in America no one has contributed more to the success of transportation in American than Warren Kendall." He asserted that he did not agree with convention speakers that this was not a time of crisis in American transportation, but stated that in his opinion the "American railroads are not going to have it said that industry made more than the railroads could haul," and asserted that transportation will not impede the nation in recovering from its greatest war.

The O. D. T. director asserted that the secret of the railroads' success in the recent war grew out of a pronouncement by the late M. J. Gormley, who in explaining the transportation difficulties of the last war said, "If you know a car is going to be unloaded, load it. If you don't know a car is going to be unloaded, don't load it." Strict adherence to that formula, Colonel Johnson said, kept the railroads open during the war and will keep them open in peace.

Advocates Tighter Regulation of Natural Gas Industry

Because railroads and natural gas companies are "competing transportation agencies," the Association of American Railroads favors Natural Gas Act amendments which would give the Federal Power Commission additional regulatory controls over the gas companies. The A. A. R. position was set forth in a brief filed recently in F. P. C.'s natural gas investigation (Docket No. G-580), the general "fact finding survey" launched a year ago.

It follows the presentation made at the investigation's Washington, D. C., sessions by Drs. Julius H. Parmelee and C. S. Duncan, directors, respectively, of the A. A. R.'s Bureau of Railway Economics and its Division of Competitive Research. These presentations were reported in the *Railway Age* of July 13, page 65.

The brief's recommendations suggest that the Natural Gas Act should be amended in the following respects: (1) To bring within its provisions direct sales from a natural gas company to a consumer; (2) to give F. P. C. power to fix minimum rates to be charged by a natural gas company for the sale of natural gas; (3) to permit the intervention in rate cases of parties now eligible to intervene in certificate cases under section 7.

The A. A. R. argued that these amendments "are desirable and necessary in the interest of fair and equal competition between railroads and natural gas companies." It asserted that a natural gas company, being "an agency of transportation," has features that are common to

other forms of transportation. "With respect to these common features," the brief added, "there ought to be a sufficient similarity of regulation of all forms of transportation so that no agency may suffer discrimination."

While it was conceded that part of a natural gas company's rate includes the cost of acquiring the gas, it was nevertheless maintained that "a calculable and large part is a charge for transporting it," such transportation costs being "carefully segregated" in F. P. C.'s uniform system of accounts for natural gas companies. "The transportation relationship between a receiver of gas and a natural gas company," the brief added, "does not differ in essentials from the relationship between the same receiver and a railroad delivering coal to him." The large consumer "buys *fuel*, not gas or coal."

With respect to direct sales, the brief said that these constituted 45 per cent of the gas transmitted and sold by natural gas companies in 1944. And "while the construction or extension of facilities for transmission of this gas are subject to the act, the sale is not." Moreover, the brief cited evidence indicating that "more than two-thirds of the gas sold by direct sale in 1944 went to large industrial consumers"; and it stated that probably more than half of the direct industrial sales are on an interruptible basis, and thus, generally, are made at the lowest rates of any classes of sales."

"Interruptible sales of natural gas," it continued, "are particularly competitive with coal in areas outside of the gas producing states because the consumers of such gas are equipped to use coal which they must use during periods of interruption. The constant availability of coal and rail transportation make low-cost interruptible natural gas service possible by providing substitute fuel during periods of interruption. The principle result of making direct sales subject to the act would be to bring them within the commission's rate-making powers; and it is submitted that the competitive situation and the relationship between gas service and rail transportation with respect to interruptible service make that desirable in the public interest. The transportation rates applicable to the movement of coal are of course now subpect to regulation."

Its proposed amendment to give F. P. C. minimum-rate powers, the A. A. R. said, would extend to natural gas companies what has become an "established principle" in the regulation of carriers subject to the Interstate Commerce Act, i. e., "that it is not in the public interest for one carrier to take traffic from another by carrying the traffic at rates below the cost of service or, for that matter, at unreasonably low rates." The brief added that "there is reason for belief that natural gas is being sold to some consumers at a fuel cost below the cost of coal because the gas is being carried at less than the cost of transportation." Later on there is a reference to "vast new projects for the construction of pipe lines and extensions and enlargements of existing lines" which indicate that the railroads "are facing greatly increased competition from natural gas companies."

Club Meetings

There has been scheduled for December 9, 10, and 11 the annual meeting of the Society for Experimental Stress Analysis. The meeting will be held in New York at the Hotel New Yorker and will include a symposium of "Telemetering of Aircraft Flight Observations."

The National Association of Corrosion Engineers will hold its annual convention in the Palmer House, Chicago, on April 7, 8, 9, and 10, 1947. There will be symposiums on the following industries: water, electrical, chemical, communications, gas, oil, cathodic protection and general. In addition to the technical sessions, there will be 100 exhibits on corrosion-inhibiting products and supplies.

The Chicago chapter of the Railway & Locomotive Historical Society will be addressed by C. E. Grigsby, assistant vice-president, American Steel Foundries, at its meeting on November 8, at 7:30 p.m., at 205 West Wacker drive, room 1200. Mr. Grigsby's subject will be, "The History and Development of the Freight Car Truck." A sound and color motion picture, entitled "In Step With the Times," will also be shown.

Safety Shoes Reduce Accidents on North Western

The wearing of steel-toe safety shoes by employees is responsible for a material reduction in "toe" accidents at the Chicago & North Western's Proviso freight house near Chicago, L. L. White, vice-president in charge of operations, has announced.

He said that the shoes, which cost no more than regular work shoes, were being sold throughout the system on the payroll deduction plan. Mr. White reported that during the past few weeks three of the company's employees have escaped crippling accidents by wearing safety shoes.

Pullman Company Returns Troop Cars to Government

Approximately 2,400 troop sleepers and more than 500 troop kitchen cars, built by the Pullman-Standard Car Manufacturing Company during the war to help move 37,000,000 troops, are being returned to the Reconstruction Finance Corporation, the company has announced. The all-steel sleepers, which accommodate 30 servicemen each, were the only passenger cars constructed during the war. The cars are being stored by the government at Illiopolis, Ill., at an unused Army ordnance plant.

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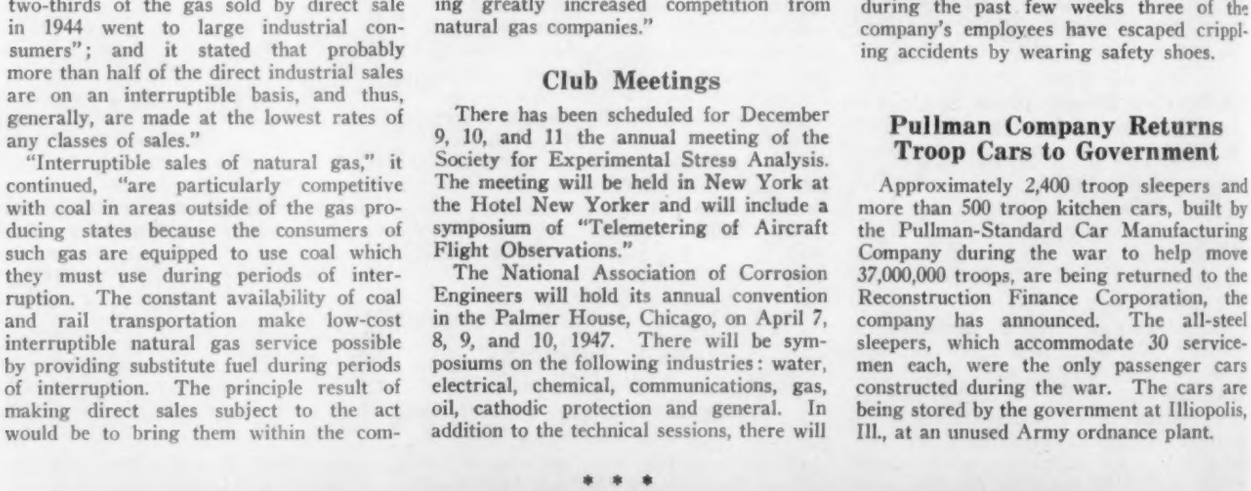


Principal speaker and officers attending the recent annual meeting of the A. A. R. Treasury Division, Edgewater Park, Miss. Left to right: E. R. Ford, executive secretary of the division; R. E. Connolly, vice-president, Illinois Central; A. E. Tate, chairman of the division and treasurer, Southern; Wayne A. Johnston, president, Illinois Central; and E. H. Bunnell, vice-president, A. A. R.

With the Government Agencies

Would Approve P.M.-C.&O. Merger

I.C.C. gets favorable report on the proposal from its Bureau of Finance

Approval of the Interstate Commerce Commission's Division 4 of the merger of the Pere Marquette into the Chesapeake & Ohio has been recommended in a proposed report by the commission's Bureau of Finance which would also conditionally authorize the Alleghany Corporation to acquire, through the C. & O., control of P. M. properties. The condition which the bureau recommended in the latter connection would require Alleghany to deposit its shares of Missouri Pacific stocks "with an independent voting trustee, which shall be exclusive of any person, firm, or corporation now occupying any fiduciary, fiscal, or financial relationship to Alleghany, Chesapeake & Ohio, or Nickel Plate, under a trust agreement to be submitted to the commission for approval."

The proposed report, in Finance Docket No. 15228, passes upon the joint application filed last March by the P. M., C. & O. and Alleghany (see *Railway Age* of March 16, page 592). It would have the commission sanction the terms of the merger there proposed by the applicants after a general finding that consummation of the plan would be consistent with the public interest. Among other "benefits of union," the bureau found that it "would not lessen competition but would create a strong well-balanced system that would afford stiffer competition to the New York Central, Pennsylvania, Baltimore & Ohio, and other railroads."

Terms of the merger are: **Each share of** P. M. 5 per cent cumulative prior preference stock, including all accrued and unpaid dividends thereon as of the merger date, to be exchangeable for one share of 3½ per cent, cumulative, convertible preferred stock and one-third of a share of common stock of the C. & O.; each share of P. M. 5 per cent, cumulative preferred stock, including accrued and unpaid dividends, to be exchangeable for eight-tenths of a share of 3½ per cent cumulative preferred stock and four-tenths of a share of common stock of the C. & O.; and each share of P. M. common stock to be exchangeable for one-half share of C. & O. common.

New C. & O. Stock—To provide for this exchange, the proposed report recommended that the commission approve the proposed issuance by the C. & O. of not exceeding $21,142,940 of 3½ per cent, convertible preferred stock, consisting of 211,429.4 shares of $100 par, and $7,806,805 of common stock, consisting of 312,272.2 shares of $25 par. Also, the bureau would approve the sale by C. & O. of such shares as came back to it in exchange for its P. M. holdings; and the further issuance from time to time of an additional $8,457,176 of common stock, consisting of 338,287,04 shares in conversion of the convertible preferred stock. Initially, the conversion ratio will be 1.6 shares of common for each share of the new convertible preferred.

The plan further provides for assumption by the C. & O. of liability for P. M. indebtedness. And in that connection the proposed report recommended approval by the commission of the C. & O.'s assumption of liability for not exceeding $59,499,000 of first-mortgage 3⅜ per cent bonds, series D, $7,355,000 of equipment trust certificates, and $904,435 of promissory notes of the P. M.; and assumption of liability as guarantor, severally with other proprietary companies of the Toledo Terminal Railroad Company, in respect of the payment of a portion of the interest on $5,800,000 of that company's first-mortgage, 4½ per cent bonds.

Another recommended finding is that acquisition by the C. & O. and, through that company, by the Alleghany Corporation, of ownership of vessels of the P. M., including its Lake Michigan car ferrits, "will not prevent such vessels from being operated in the interest of the public and with advantage to the convenience and commerce of the people, and will not exclude, prevent, or reduce competition on the Pere Marquette's routes by water." While the applicants assumed that the commission's 1915 determination of this matter in P. M.'s favor would accrue to them, they asked for any new determination of questions arising under the Panama Canal Act as might be considered necessary. The bureau thinks the finding it recommends is required.

Chain of Control—The proposed report in general reviewed the history of P. M.-C. & O. financial and traffic relationships and set out the bureau's favorable reaction to the merger proposal. It was pointed out that C. & O. now controls P. M. through ownership of 313,900 shares, or 69.69 per cent, of its common stock, and 13,950 shares, or 16.05 per cent of its preferred—a total of 327,850 shares, or 47.74 per cent of P. M. stock of all classes. Meanwhile, Alleghany controls C. & O. "through ownership of the beneficial interest in 606,634 shares, or 7.92 per cent, of its common stock."

Commenting on the applicant's contention that the proposed merger is a "natural end-to-end extension" of the C. & O. "into important industrial and coal-consuming territory," the proposed report pointed out that the systems connect for interchange of traffic at Toledo, Ohio, LaCrosse, Ind., and Chicago. Including lines used under trackage rights, the C. & O.'s 3,084-mile system extends from the bituminous coal fields of southern West Virginia, eastern Kentucky, and southern Ohio, eastward to tidewater at Hampton Roads, Va., and north and west to the Great Lakes at Toledo and Chicago.

(*Continued on page 740*)

Fare Cut Necessary to Boost Air Travel

Commerce Department report also notes competition by non-scheduled carriers

The nation's airlines, through the saving of time made possible by air travel and because airline fares are now close to, or in some cases actually below those for Pullman travel, are at present in a competitive position to capture the bulk of the first class travel market, but they (1) will have to bring their fares down before they can compete effectively for the larger passenger market represented by rail coach and bus travel and (2) must be prepared to face an important amount of competition from other branches of aviation, including private flying, company-owned planes and non-scheduled and charter services. These findings are made in the August-September industry report on "domestic transportation", prepared by the Transportation Division of the Department of Commerce's Bureau of Foreign and Domestic Commerce. The division is headed by James C. Nelson.

According to the report, fares for the present class of trunk-line air service are not likely to be reduced "significantly below" existing levels for "at least another year and possibly longer." After that time, the report said, "appreciable reduction" should be made possible by the use of more economical equipment, by improvements in operating efficiency and by a "wider spread" of "overhead" and other indirect expenses.

Might Cut Out "Extras"—"On the hypothesis of a 1946 price level, those several economies should make basic fares in the neighborhood of 3.5 cents per passenger mile attainable within two or three years," the report added. "In addition, it is likely that some airlines will supplement their present service with a second-class, day-coach type of operation, providing less roomy accommodations and eliminating free meals, reservations and many service 'extras'. Savings possible with this type of operation might permit the further reduction of passenger fares by perhaps ½ or ¾ of a cent per passenger mile."

Noting that the level of airline operations was greatly curtailed during the war because of the shortage of equipment, the report pointed out that during the same period economic and technological developments and "greater interest in air travel" were "paving the way" for a "spectacular expansion" of air travel with the war's end. It further stated that although scheduled airline operations which have expanded rapidly since V-J Day have "failed to keep fully abreast of the enlarged and growing demands for air transportation" and that "on most routes, service remains consid-

(*Continued on page 740*)

Railroad Efficiency Highest Ever Known

But O. D. T. Director Johnson also emphasizes serious freight car shortage

Colonel J. Monroe Johnson, director of the Office of Defense Transportation, last week hailed the October 19 week's loadings of 931,766 freight cars as "the most wonderful performance in the history of American railroading," but he emphasized at the same time the persistence of serious car-supply conditions, including the box car situation which has deteriorated to the point where the accrued shortage of such cars is now "greater by one-half than that piled up during the 'big freeze' of February-March of 1945." The latter is shown by the accompanying chart which the O. D. T. director released for publication.

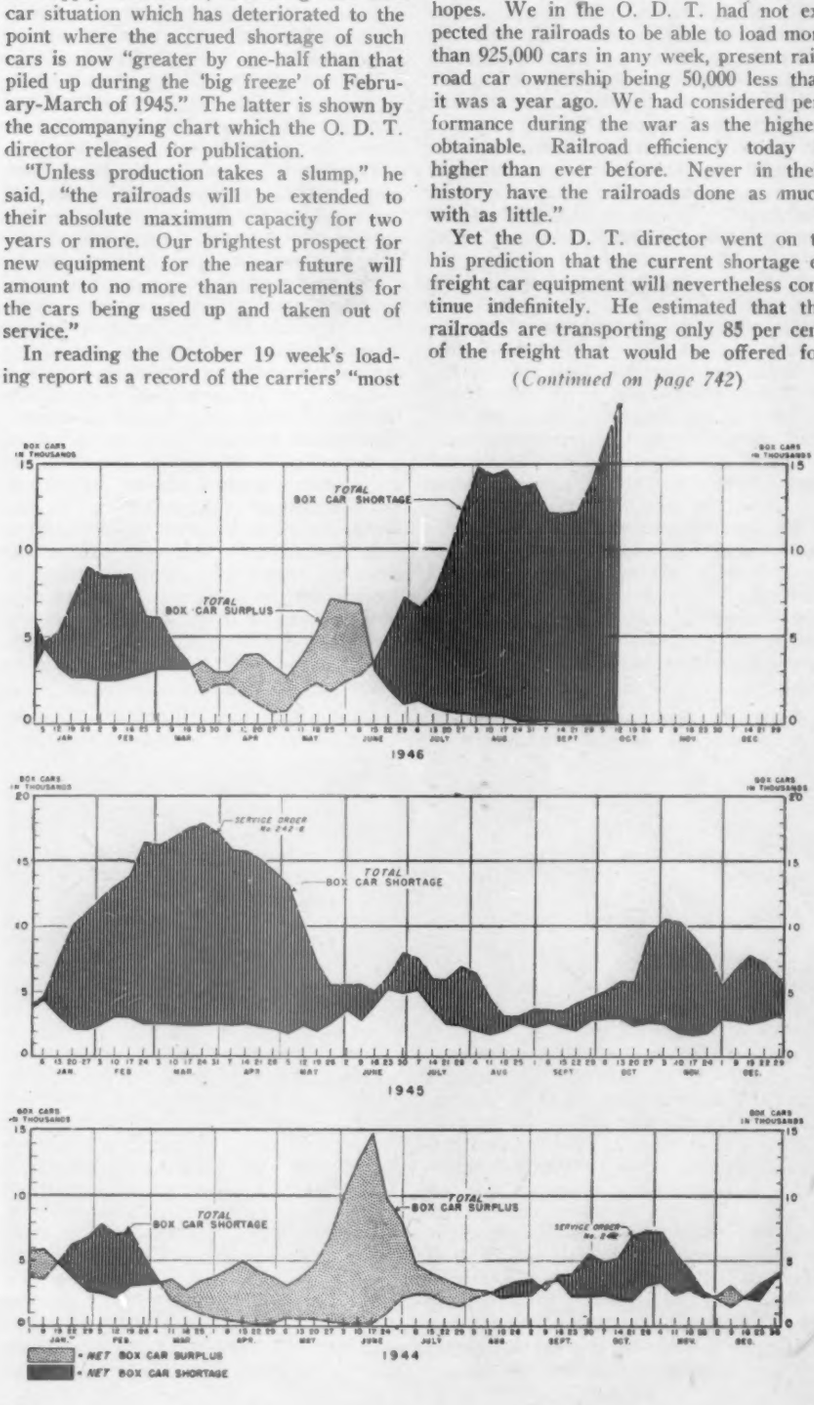
"Unless production takes a slump," he said, "the railroads will be extended to their absolute maximum capacity for two years or more. Our brightest prospect for new equipment for the near future will amount to no more than replacements for the cars being used up and taken out of service."

In reading the October 19 week's loading report as a record of the carriers' "most wonderful performance," Colonel Johnson recalled his prediction that the railroads this fall would be unable to turn in a weekly total of more than 925,000 cars. "They have now loaded 6,000 more cars than that," he acknowledged, adding that he still didn't see "how they did it."

War Record Exceeded—"The number of cars loaded," he continued, "exceeds by 16,000 any weekly loadings handled during the war years. It is the highest loading since the week ended October 30, 1930, when the loading totaled 984,510 cars. Furthermore, that record was accomplished when the railroads owned 400,000 more cars than they do today. Last week's loading goes beyond our most enthusiastic hopes. We in the O. D. T. had not expected the railroads to be able to load more than 925,000 cars in any week, present railroad car ownership being 50,000 less than it was a year ago. We had considered performance during the war as the highest obtainable. Railroad efficiency today is higher than ever before. Never in their history have the railroads done as much with as little."

Yet the O. D. T. director went on to his prediction that the current shortage of freight car equipment will nevertheless continue indefinitely. He estimated that the railroads are transporting only 85 per cent of the freight that would be offered for

(Continued on page 742)



One-Year Increase in Express Rates

Commission advance calculated to produce $58,900,000 a year

With expressions of its misgivings as to prospects for realizing the estimated yield and its doubt as to the justification for some of the adjustments, the Interstate Commerce Commission has authorized the Railway Express Agency to establish for a period of one year the temporary rate increases which R. E. A. proposed in the Ex Parte No. 163 proceeding on a basis calculated to produce $58,900,000 in additional annual revenue. The commission's report was dated October 28 and made public October 30.

It permits publication on not less than the usual 30 days' notice of tariffs carrying the authorized increases. The proceeding grew out of R. E. A.'s June 24 petition asking that the commission conduct an investigation into the level of express rates and charges; and, meanwhile, that it permit the now-authorized increase to become effective, as a measure of interim relief, in advance of hearing. The latter was not done, the present report having been preceded by a series of hearings and oral argument.

Nature of Increases—Under the authorized temporary adjustment R. E. A. will (1) increase all l.c.l. first class and commodity rates per 100 lb. by 20 cents and related second-class rates by 15 cents; (2) revise graduated charges on shipments under 100 lb. to the basis of the pound rates, plus 50 cents, except that there will be no increases on daily newspapers, milk and related products, and returned empty containers; (3) increase all minimum and all package charges other than first- and second-class graduated charges by 30 cents; and (4) increase money rates by 20 cents per $1,000, and all money classification charges by 30 cents. In making these increases R. E. A. will cancel as to all traffic except returned empty containers the emergency charge of 10 cents per shipment which has been in effect since 1942.

The commission resolved its misgivings and doubts in favor of the adjustment because of its temporary nature, but the decision requires R. E. A. to report on the revenue results and to submit a permanent proposal within six months. The phrase "or until our further order" qualifies the report's grant of authority to establish the rates for a period of one year.

"While the evidence," the commission said, "clearly establishes the inadequacy of the present revenues to meet the increased costs of operation and taxes and to make reasonable payments to the railroads and other carriers for the facilities furnished and the services rendered by them, we have some doubt as to the justification of some of the proposed rates and charges. However, in view of their temporary character we will allow petitioner to file tariffs naming rates and charges on the bases proposed, but as a condition of our approval of its proposals we shall require petitioner to make another test covering representative days within six

months after the new rates become effective for the purpose of showing, among other things, the revenue effect of the increased rates under authority of our findings herein.

"Within the 6-months' period petitioner will be expected to present to us the results of the above-described test, together with its permanent proposal. Such proposal should give consideration to the graduation of rates with distance, and to the elimination of inconsistencies in its rate structure."

Expects Parcel Diversion—Previously the commission had indicated its view that the increased minimum charges will divert "much of the small-package traffic" to parcel post and to the forwarders. Also, it noted that R. E. A.'s present approach is the opposite to that taken in *Express Rates 1938-1939* when rates on small packages were reduced to stimulate that business while the charges on long-haul traffic were increased as a revenue measure. "The experiment was successful as to small-package traffic, but little increased revenue was derived from the long-haul traffic," the report said. "Since 1939 conditions have changed materially, wages have increased by 50 per cent and with other increased costs petitioner claims that much of this traffic is now being handled at a loss. Because of the convenience of pick-up and delivery and free insurance up to $50, petitioner hopes to retain a considerable portion of the small-package shipments at the increased rates."

In its review of R. E. A. evidence as to increased costs, the report set out figures showing that since 1942, when the emergency charge of 10 cents per shipment was authorized, payroll costs and payroll taxes have risen $62,283,230, not including the additional $6,000,000 a year in payroll taxes levied on R. E. A. as a result of the Crosser Act's liberalizing amendments to the Railroad Retirement and Railroad Unemployment Insurance acts. Meanwhile, costs other than payroll have increased $1,130,000.

"There is no contention," as the report put it, "that the revenues received by the Express Agency are not adequate for its own corporate requirements, but it is alleged that they are insufficient to afford a reasonable return to the railroads and other carriers for the services performed by them in the express services." The ratio of express privilege payments to the carriers to gross R. E. A. revenues from domestic traffic is shown by a table to have fallen from 50.25 per cent during the feleral control period of World War I to 22.62 per cent during the first five months of this year. The ratio for the first five months of 1945 was 27.06 per cent, while the figure for that year as a whole was 36.55 per cent. R. E. A. estimates that the higher rates will put its gross revenues from domestic traffic on an annual basis of $377,900,000 and leave a balance of $107,513,000 for payment as express privileges. The payments for the first five months of this year have totaled $40,471,000.

Questions "Test Year" Plan—With respect to these express privilege payments the commission takes occasion in the report to complain that the modified apportionment arrangements which became effective in 1938 were entered without commission authorization and thus R. E. A. and the carrier parties "apparently are in violation of section 5(1) of the act and of our order setting forth the authorized method of apportionment." The commission added that R. E. A. "will be expected to comply with that provision of the act."

The discussion leading up to this pronouncement recalled that the commission sanctioned an arrangement for the pooling and apportionment of R. E. A. revenues among the carriers when it approved the railroads' acquisition of R. E. A. in *Securities and Acquisition of Control of Ry. Exp. Agency*, 150 I. C. C. 423. That approved arrangement provided for monthly settlements with the carriers, the report pointed out. It then went on to say, "Because it later appeared that the cost of accounting on a monthly basis was excessive and reduced the express privilege payments by about $4,000,000 per annum, the Express Agency proposed to the carriers that apportionment be made on the basis of percentages arrived at by using the results of operations in a test year. By separate supplemental agreement in 1938, substantially all of the carriers agreed to the revised plan and it became effective July 1, 1938."

This supplemental agreement is set out in one of the report appendices. The commission said that it "was not filed with us until after the hearing herein, and no application has been made for modification of our order setting forth the terms under which the pooling of revenues and division of earnings were authorized."

With further reference to this matter, the report discussed exhibits showing amounts paid to individual roads for express privileges in 1939 and 1945, years during which the "so-called simplified plan of apportionment" was in effect. On the basis of figures indicating comparative 1939 and 1945 payments in dollars per 1,000 car-foot-miles for selected railroads, the commission observed that "radical and unexplained changes are shown."

Variable Apportionments—The figures show that the New York, New Haven & Hartford received $4.65 per 1,000 car-foot-miles in 1939 and $5.64 in 1945, an increase of 21.3 per cent. Meanwhile the Union Pacific's payments increased from $2.48 to $7.85, or 216.5 per cent; the Chicago & North Western's from $2.99 to $9.46, or 216.4 per cent; the Chicago, Burlington & Quincy's from $2.47 to $7.34, or 197.2 per cent the Chicago, Milwaukee, St. Paul & Pacific's from $2.72 to $8, or 194.1 per cent; and the Southern Pacific's from $2.46 to $6.26, or 154.2 per cent.

The lowest payment per 1,000 car-foot-miles received by any road in the selected group was the Baltimore & Ohio's $1.85 in 1939 and $2.38 in 1945, an increase of 28.6 per cent. Other increases were: New York Central, 23.2 per cent; Pennsylvania, 33.3 per cent; Louisville & Nashville, 62.5 per cent; Southern, 77.9 per cent. The average payment per 1,000 car-foot-miles to all railroads was $2.51 in 1939 and $5 in 1945, an increase of 99.2 per cent. The commission had no evidence of record to compare the foregoing figures with apportionments prior to 1939, under the original arrangement. It observed, however, that the disparity in rates of payment indicates that the present apportionment "is not made on a uniform basis."

Output of Cars and Locomotives Decreased in September

Output of railroad freight and passenger cars and locomotives during September decreased sharply as compared with the previous month, according to Civilian Production Administrator John D. Small's latest report on civilian production.

A total of 4,687 freight cars was produced during September, as compared with 5,532 in August and approximately 4,000 in each of the three preceding months. The report noted that the decrease was concentrated entirely in the production of cars for domestic roads, which dropped from 5,141 in August to 4,016 in September, as noted in *Railway Age* of October 12, page 618. Production for foreign roads, meanwhile, increased from 391 in August to 671 in September.

"The backlog of unfilled orders continued to increase to 108,000 on October 1 from 100,000 on September 1," the report said. "The entire gain came from domestic roads whose back orders rose from 57,000 to 66,000, while foreign orders were reduced approximately 1,000 cars to 42,000."

Only 34 passenger cars—half of the total August output—were turned out during September, while the backlog of unfilled orders increased from 2,788 cars on September 1 to 2,901 cars, including 2,821 for domestic use, on October 1. The report said that shortages of components and specialties continue to be the "restricting factor" in the production of passenger units.

Of 94 Diesel-electric locomotives produced in September—as compared to 96 the previous month—72 were for domestic use. On the other hand, only two of the 110 steam locomotives manufactured in September—14 less than in August—will go to domestic roads.

September production of railroad car brake shoes also declined 2 per cent under August, the decrease being attributed to the fewer working days. According to the report, brake shoe demands remain large because the railroads are "now handling the greatest volume of freight on record."

To Hear Class Rate Arguments February 10

The Supreme Court has set February 10, 1947, as the date on which it will hear argument in connection with its review of the decision of the special three-judge federal court sitting at Utica, N. Y., which last May upheld the Interestate Commerce Commission's interim order in the No. 28300 class rate case. (See *Railway Age* of October 19, page 657).

I. C. C. Hears Oral Argument In Ex Parte No. 164

Oral argument as to whether or not the Interstate Commerce Commission should undertake an investigation sought by the United States Maritime Commission into the lawfulness and reasonableness of railroad rates and practices which are competitive with those of domestic water carriers was held before the commission on October 30 and 31. Tht proceeding is docketed as Ex Parte No. 164.

As noted in *Railway Age* of September

14, page 463, the assignment of the matter for argument was a part of the commission's response to the M. C. request, another phase being the recent order requiring the railroads to show cause why the I. C. C. should not modify or vacate outstanding fourth-section orders in some 60 proceedings wherein relief from the long-and-short-haul clause has been granted in connection with the maintenance of water-competitive rates.

Among those appearing at the oral argument were representatives of the Maritime Commission, the War and Navy Departments, intercoastal and coastwise water carriers, the National Industrial Traffic League, the Department of Agriculture, the government-owned Inland Waterways Corporation, and western and eastern railroads.

On October 29, the commission heard oral argument on Examiner O. L. Mohundro's proposed report in the No. 16028 and related proceedings. As noted in *Railway Age* of September 28, page 537, that report recommends that the I. C. C. affirm outstanding fourth-section relief orders under which the railroads are maintaining water-competitive rates on citrus fruits from points in Florida to North Atlantic ports.

Would Approve the P.M.-C.&O. Merger

(*Continued from page 737*)

In general the Pere Marquette system, which embraces 1,948 miles of line, extends from Chicago, through Grand Rapids, Mich., and Detroit, to Buffalo, N. Y.; from Toledo, through Flint, Mich., and Saginaw to Ludington, on the east shore of Lake Michigan; and from Grand Rapids to Petoskey, Mich. Also, it operates Detroit river car ferries and its Lake Michigan car-ferry lines totaling 225 route miles between Ludington and Wisconsin terminals at Milwaukee, Manitowoc and Kewaunee.

As the report noted, the affiliation of the two roads dates back to the 'Twenties, officers of the C. & O. having been placed in corresponding positions with the P. M. in 1929. "Under this joint management both carriers have profited in economies and in increased traffic," the report added. In another place it said that the applicants had elected to propose a merger plan rather than consolidation because "the merger is easier to handle mechanically, and is more economical in avoiding the issue of stock of a new consolidated company."

To Eliminate Pere Marquette—The P. M. will nevertheless lose its identity in the new set-up. "Upon the merger date," the report said, "the corporate existence of the Pere Marquette will continue in the Chesapeake & Ohio insofar as provided by law, but otherwise will cease upon such date, and thereupon the two companies will be considered as a single corporation, namely, The Chesapeake and Ohio Railway Company, which will continue as a corporation of the Commonwealth of Virginia, possessing all the powers of both companies."

The maximum number of authorized shares of C. & O. capital stock will be 12,650,000, consisting of 650,000 shares of preferred and 12,000,000 shares of common. Constructed balance sheets giving effect to the merger indicate that the C. & O. capitalization would consist of: Capital stock, $220,383,689; funded debt unmatured, $214,122,000; equipment obligations, $47,230,736. To these figures should be added any equipment obligations authorized and issued subsequent to December 31, 1945; and deducted therefrom would be any retirements effected since that date, the proposed report explained.

The bureau did not concede that the market-price test used by the applicants in setting up the terms for exchange of P. M. stock was properly applied to the exclusion of all other measures. Nevertheless it found the terms equitable after applying other tests based on earnings and property values. One phase of the proceeding involves the Michigan legislature's action in passing a law to relieve the P. M. from a requirement prohibiting the merger of a Michigan railroad corporation into any corporation not organized under the laws of that state. Question was raised as to whether Michigan had reserved the right to thus amend charters of its corporations and whether the amendment impairs or takes away vested rights.

"By implication," the proposed report said of this matter, "counsel answer these questions in favor of the applicants' contentions; but, in view of the challenge, their opinion ought to be supported by a memorandum of authorities, and the recommendations of this report are predicated upon the understanding that this will be furnished before any order authorizing and approving the applicants' proposal is issued."

Dealing with the effect on employees, the report stated that while there would be no change in train operation, certain clerks would be displaced by the merger. It noted that the applicants had agreed with the Railway Labor Executives Association, the Brotherhood of Railroad Trainmen and the Brotherhood of Locomotive Engineers to apply the Washington job-protection agreement to employees represented by those organizations. And it recommended that the commission impose the conditions set forth in the Interstate Commerce Act's section 5 for the protection of employees not thus represented.

Fare Cut Necessary to Boost Air Travel

(*Continued from page 737*)

erably below normal requirements," developments in recent months indicate that the "current inadequacy" of scheduled airline service in the United States should be "generally relieved" by early 1947.

"Under the pressure of post-war expansion, the quality of air service has deteriorated markedly," the report continued. "Unprecedented levels of operations and traffic have overloaded ground organizations and facilities, with resultant delays, inconveniences and discomfort for the traveling public."

With respect to non-scheduled and charter air operations, the report asserted that the most "spectacular development" in this category of service has come since the end of the war, with the release of thousands of trained aviation personnel from the armed forces and the disposal of hundreds of surplus transport pilots.

"Services offered by these operators range from occasional charter rights in single passenger planes to non-scheduled operations along specific routes in planes as large as the DC-4," the report said. "Potentially, this general category of operations represents the utmost flexibility in public transportation, being limited neither by terrain nor by fixed route patterns. It is not clear to what extent those services may be restricted by economic regulation. If a liberal policy in this matter is followed, considerably greater development of general and special charter services may be anticipated, together with some further development of a 'day-coach' class of service along non-scheduled routes."

According to the report, the present trunk-line route pattern, when fully developed, will provide reasonably complete coverage of all major population centers, although it cautioned that scheduled air service to the great mass of smaller communities "must await the development of local and feeder operations."

Expects Reduced Fares Soon—In its summary of the future competitive position of the airlines with respect to fares, speed, convenience, comfort and passenger service, the report predicted that within two or three years, airline fares may reach a level of roughly 3.5 cents per passenger-mile for first class service and possibly 3.0 cents for second class service. It commented that although "proportionate reductions" may be made in rail and bus fares (it noted that not until airlines are able to develop low cost tour and excursion fares are they likely to divert any significant amount of traffic from motor transportation) leaving the relative differential essentially unchanged, the airlines would benefit from the fact that the absolute difference for any particular trip would be considerably smaller than it is now.

It further asserted that although the railroads can economically furnish more roomy accommodations and more recreational facilities than can the airlines, the vastly shorter transit time of the latter to a large extent reduces the importance of such accommodations. It said that the airlines will have an important advantage in convenience of schedules because of "greater frequency" on most trunk-line routes, adding that inconvenience of airport location will probably have been reduced by improved ground service. At the same time, it was pointed out that "for their part, the railroads have already improved their transcontinental service by providing through sleeping cars and coaches," and "similar improvements may be expected in the future".

The report also emphasized that safety is one of the most important factors affecting the public acceptance of air transportation. It said that the airlines will require a considerably improved safety record, not only to sell air travel to those who never have used that form of transportation, but also to retain the confidence and patronage of the larger part of the public which now accepts the safety of air transport. The report noted that as of 1945, the number of airline fatalities per 100 million passenger-miles was 2.17, as compared with 0.16

News Department continued on next left-hand page

The Steam Locomotive

is a high money earner per dollar of investment

Continual advances in the design and construction of the steam locomotive have steadily increased its practical position as a high money earner in relation to its initial cost and expense of maintenance and operation.

This is further emphasized by the ability of modern steam locomotives, such as this Southern Pacific Lima-built 4-8-4, to power heavy passenger or freight trains with equal efficiency.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED INCORPORATED, LIMA, OHIO

for railroads, 0.17 for buses and 2.9 for passenger automobiles and taxis.

Airport Accessibility — The report also extensively covered the factors involved in ground transportation to airports. It said that local transportation to and from airports now represents a disproportionate percentage of the entire elapsed time and cost of an airline trip, especially for short haul travel, with the cost of limousine charges averaging approximately 90 cents and the time required for limousine trips averaging roughly 40 minutes.

"There is little prospect for reducing travel time to airports until helicopter or other air shuttle services are developed," it said. "A number of applications proposing helicopter service already have been filed with the Civil Aeronautics Board and the first hearing involving such applications has recently been held. While air shuttle services such as these may ultimately solve the time problem of terminal transportation, the short term solution of the cost problem must come through improved surface facilities. In some cities, public transit to airports is completely lacking, and there is, therefore, no alternative to expensive limousine or cab service. In those cities where public transit is available, it is almost without exception slow, indirect and inconvenient. . . .

"From the passenger's standpoint, the most satisfactory solution to this general problem would probably come through airline operation of limousines or buses, possibly by means of a jointly-used, non-profit subsidiary. Travel to and from airports is a necessary part of an air trip, and the airlines have an important opportunity to improve the over-all quality of their service by taking a direct hand in the improvement of this terminal "transportation."

Another section of the report pointed out that the airline industry reported earnings of $124.4 million for the four war years, 1942-1945, "nearly 7½ times those of the four years immediately preceding the war". The airlines' undistributed earned surplus also increased from $5.9 million in 1941 to $56.0 million in 1945.

"With its increased reserves and greater fluidity," the report observed, "the airlint industry as a whole appears to be in a favorable position to undertake the financing program that will be required to put the . . . improvements in effect."

Won't Reconsider D. & R. G. W. Junior Bondholder Cases

The Supreme Court of the United States this week refused to reconsider the June 10, 1946, decision wherein it reversed the Tenth Circuit Court of Appeals to uphold a federal district court ruling that holders of Denver & Rio Grande Western general mortgage bonds were "not reasonable justified" in rejecting that road's reorganization plan as approved by the Interstate Commerce Commission. At the same time, Justice Frankfurter, whose lone dissent from the June 10 decision was then noted, filed an opinion setting forth the detailed grounds for his disagreement with the majority.

As noted in the *Railway Age* of June 15, page 1193, where the Supreme Court's opinion was reported, the circuit court had reversed the district court and remanded the case to the commission. Nearly 80 per cent of the general mortgage bondholders voted to reject the plan which allocates to them common stock in the face amount of 10 per cent of their claim. Their argument was that they were entitled to more favorable treatment out of the carrier's war-time earnings and free cash in excess of operating capital needs. Also, they contended that their position should have been enhanced by investment of "more than $43,000,000" out of earnings during the period of the bankruptcy.

In reversing the circuit court's opinion sustaining these contentions, the Supreme Court ruled in effect that a reorganization plan, "fair and equitable" to all parties as of its effective date, need not thereafter be altered by the commission to give dissenting junior creditors more favorable treatment out of subsequently-realized lush earnings if such earnings were not unforeseen by the commission when it approved the plan. Thus the decision sustained the district court's orders affirming and confirming the plan which had been accepted by all other classes of creditors.

Frankfurter Dissents—In the dissent which he filed this week, Justice Frankfurter said that the Supreme Court, by the majority decision, "imposes its judgment that the plan was 'fair and equitable' upon the general bondholders and thus in effect deprives them of the very right which Congress gave them to be judges of their own interests so long as the Court cannot say they were capricious or greedy in their judgment." The dissenting justice led up to this pronouncement with lengthy quotations from the opinions of the circuit court which he called "a strong bench" and a discussion of the pertinent provisions of the Bankruptcy Act.

"From the confusing financial details," he said, "one stark fact emerges. In 1939 the commission found that the debtor would be able to earn enough in the future to provide an income on one-third of the general mortgage bonds. . . . In the reorganization plan in 1943 the commission concluded that the debtor would not earn enough to provide income on more than one-tenth of the general mortgage claims. . . . Since 1939 the debtor achieved a position permitting it to make large debt reductions and to reduce its interest charges. It accumulated a very large net income in excess of its interest service, it expended large sums to decrease operating costs and improve its business propects, so that the future earning power of the railroad was greatly increased.

"In the face of all these factors the senior security holders were given not only securities for the full amount of their claim but also all cash accumulations available for the reduction of the road's indebtedness. Improvements in the financial and physical structure of the road patently calculated to increase the profits of the future owners of this road have been made the basis of substantially wiping out one class of the present owners. Inequitable consequences such as these led the circuit court of appeals to conclude that the plan failed to satisfy the command of Congress that as a matter of judicial judgment a reorganization plan must be found 'fair and equitable.'

"To defeat the plan it is not necessary, however, to find it intrinsically wanting in fairness and equity. Congress did not authorize the enforcement of a plan for reorganization once it is found, as a matter of judicial judgment, to be 'fair and equitable.' Congress wrote into law another and a vital condition to the validity of a railroad reorganizaion plan. A plan must also commend itself as 'fair and equitable' to the various classes of creditors. And if any class rejects it, the plan can prevail only if the district court is warranted in finding that such rejection 'is not reasonably justified in the light of the respective rights and interests of those rejecting it and all the relevant facts.'

"Claimants who are thus entitled to vote on their interests as a class are surely not expected to vote as altruists any more than they are to be allowed to behave as unreasonable obstructionists. If that which Congress has written is not to be stricken out, we must recognize the referendum which Congress has lodged in each class of creditors as a means of self-protection by each class of creditors and not as an occasion for empty dialectic.

"Prophetic Judgment" — "On a fair and practical construction of the power which Congress has seen fit to place in the hands of the various creditor classes, a class can be deemed not 'reasonably justified' in exercising the right which Congress gave them to vote their interests, only if a court can say that no intelligent class of creditors, regardful of their class interests, but not obviously hostile to the common interest with which their class interest is involved, could have objected to the plan. Any other construction reads 'reasonably justified' out of the statute. In effect that is what the district court has done. And thiis court, with almost the candor of silence, appears to sanction such judicial deletion of what Congress has written. For it does not find that the general bondholders were not reasonably justified from their intrinsic point of view to exercise their right to reject the plan. It does little more than assert this conclusion on the finding that the plan was in fact 'fair and equitable.'

"To assume that if a court finds a plan is 'fair and equitable' no class of creditors can be reasonably justified in rejecting it, is to assume that the ascertainment of fairness concerning so complicated a situation as a plan for a railroad's reorganization lies in the realm of even approximate certitude. Quite the opposite is true. A court in ascertaining whether a plan is fair and equitable is not engaged in ascertaining indisputable facts. It is forming a judgment, and largely a prophetic judgment, regarding a maze of factors, and as to each factor there is usually room for considerable difference of opinion."

Emergency Board Report

Settlement of the dispute between the Utah Idaho Central and those of its employees who are represented by the International Association of Machinists was announced last week in the report of the emergency board which President Truman

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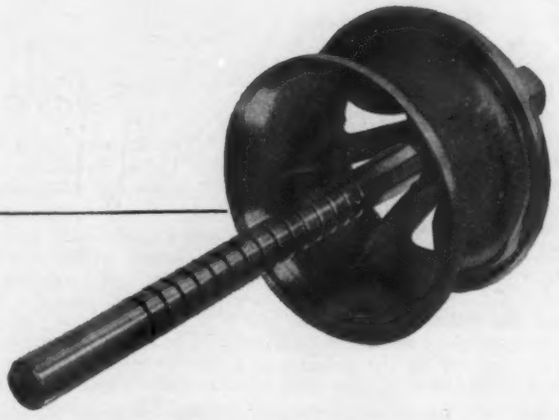
POPPET VALVES

will increase power of

underboilered locomotives



The fact that a certain class of locomotive is deficient in boiler capacity is an added and compelling reason for seriously considering installation of the Franklin System of Steam Distribution.

The Franklin System materially increases the horsepower which can be produced from a given quantity of steam. Using poppet valves in place of piston valves, it increases the efficiency of transforming steam into horsepower — will produce, *for the same boiler output and for the same fuel consumption,* 19% to 30% greater maximum power, depending on locomotive design.

This increased capacity may well be the extra power needed to permit an underboilered locomotive to take its place in regular service — either freight or passenger. If so, conversion to poppet valves will be one of the most worthwhile investments you can make.

May we show you what can be done with locomotives which you consider deficient in boiler capacity?

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

appointed on September 23 to investigate the controversy. Under the settlement, effected by the board in the role of mediator, the employees will be reclassified, given a 13 per cent wage increase and two weeks annual vacation with pay.

Car Service Orders

Interstate Commerce Commission Service Order No. 632, effective from October 28 until December 21 unless otherwise modified, suspends tariff provisions which allow the use of trailer cars for handling of overflow shipments of livestock from feed lot, market or concentration points including both interstate and intrastate traffic.

Amendment No. 4 to Service Order No. 87 became effective October 31, to modify demurrage rules applicable to tidewater coal handled at North Atlantic ports. It grants relief from conditions due to the maritime strike, providing that excess debits accruing during the settlement period ending November 1 may be offset by excess credits earned at the same point by the same consignee in the settlement period ending January 1, 1947. Also, the amendment postpones the order's expiration date until January 1, 1947.

Service Order No. 617-A, effective October 31, vacated Service Order No. 617 which was issued, effective October 1, to establish a permit system for grain shipments to or from points in Minnesota, Montana, North Dakota, South Dakota and the Wisconsin points of Superior, East End and Itaska.

Three orders which had been scheduled to expire October 31 have been extended by the commission until April 30, 1947. They are: No. 340, which provides minimum weights on outbound cars from transfer points in the West where westbound carload freight is transferred by railroads; No. 354, which directs connections of the Toledo Peoria & Western to reroute traffic that cannot be handled by that strike-bound road; and No. 381, which requires prompt forwarding from Mobile, Ala., of cars comprising trainload shipments of bauxite ore.

Three general permits modifying minimum-loading requirements on certain shipments of carrots, lettuce and bananas, which were scheduled to expire October 31, have been extended indefinitely by the Office of Defense Transportation. The extensions came in General Permit ODT 18A, Revised 8A; General Permit ODT 18A, Revised 9—Amendment 1; and General Permit ODT, 18A, Revised 10A. They apply in turn to shipments of new fresh harvested carrots from Arizona, California, Idaho, Montana, New Mexico, Oregon, and Utah; lettuce from Arizona and California; and ripe or soft bananas from Atlantic, Gulf, and Pacific ports.

Railroad Efficiency Highest Ever Known

(*Continued from page 738*)

shipment if cars were available, setting the potential demand for cars now at about 1,096,000 a week.

"Of that total," Colonel Johnson continued, "100,000 carloads (of the excess over current loadings) are not being produced for want of transportation. The remaining 64,000 carloads of freight are being produced and warehoused. We won't catch up with this backlog until about next March and by that time we'll begin going behind again."

No Hysteria—Meanwhile, the O. D. T. director finds grounds for hope in the "common sense" way in which the American shipper is taking the situation. As long as all interested parties "remain calm and avoid hysteria, we'll get by," he added. The war's railroad transportation problems, he also said, were "child's play" compared to present difficulties. In the latter connection, the O. D. T. director explained that war traffic involved trainload movements whereas the same number of carloads now require more complicated handling. Moreover, the growth of l. c. l. business has been an aggravating factor.

Colonel Johnson suggested that he could perhaps relieve the l. c. l. situation if he were to deny pick-up and delivery service to anyone who doesn't receive freight six days a week and require further coordination and consolidation of railroad l. c. l. services between common points. But he called these "severe" measures which he is "loath" to adopt now that the war is over. He added, however, that the war "turned up nothing like we have now."

Colonel Johnson also revealed that the recent relaxations of O. D. T.'s l. c. l. minimum loading order were for an "experimental period" of 60 days to which he agreed as a result of railroad repesentations, though he was "extremely doubtful" about the matter. The relaxations were embodied in General Permits ODT 1, Revised-10, and Revised-11. The first waives the order's 10-ton minimum loading requirements with respect to westbound and southbound l. c. l. cars from Official territory east of the Indiana-Illinois state line (not including any point within the Chicago switching district); under the second, eastbound l. c. l. cars may be forwarded from the same territory, but including the Chicago switching district, when consigned to any one destination with a minimum of 7½ tons per car.

Asked about the outlook in the event of a coal strike during November, Colonel Johnson replied that while he is an "optimist," he always prepares for the worst possible situation. He went on to say that the railroads now have an average of 40 days' supply of coal on hand, and that 16,000 carloads on wheels at the ports would also be available. He stated further that "other steps" were being taken to put the railroads in the "best possible shape" if a strike should come.

Emergency Board Appointed in Short Lines Wage Dispute

President Truman on October 25 issued an executive order creating an emergency board to investigate disputes between 23 short-line railroads and their employees as represented by the 15 non-operating unions. The disputes, which had brought threatened strikes set for October 28, involve the employees' demands for application to them of the 18.5 cents per hour wage increase granted to railroad employees generally last spring.

Members of the board are James H. Wolfe, Robert E. Stone, and Floyd McGown. They were scheduled to open hearings at Chicago on October 31.

Equipment and Supplies

LOCOMOTIVES

The Minneapolis & St. Louis has ordered one 1,000-hp. Diesel-electric road locomotive from the American Locomotive Company for delivery in June, 1947. A similar locomotive was delivered to the road by American Locomotive this week and early delivery by the Electro-Motive Division of General Motors Corporation of a three-unit 4,050-hp. Diesel-electric freight locomotive is expected.

FREIGHT CARS

The Minneapolis & St. Louis has ordered 600 50-ton box cars from the General American Transportation Corporation.

SIGNALING

The Reading has placed an order with the Union Switch & Signal Company for eight sets of 4-indication, continuous-code cab signal equipment for multiple-unit motor-trailer cars now being built, which equipment is similar to that in service on multiple-unit cars operating in the road's electrified territory.

The International-Great Northern has ordered materials from the General Railway Signal Company for the installation of absolute permissive block signaling on 65 miles of single track between Oakwood, Tex., and Hearne. Type K relays, welded steel instrument cases and 78 Type D signals are included in this order.

The Chicago & North Western has ordered a romote control system from the General Railway Signal Company. Two electric switch machines and 7 signals at a 2-track to 4-track layout at Vale, Ill., will be controlled from JN Tower, about 2 miles distant. The 12-in. by 12-in. control panel will have 8 track indication lights, 2 switch levers, 2 signal levers, and 2 push-buttons for non-stick operation of the high signals. Model 5-D dual-control electric switch machines, Type MD dwarf signals, and a 6-ft. by 6-ft. welded steel housing will be used on this installation.

The Illinois Central has ordered equipment from the General Railway Signal Company for the installation of an all-relay electric interlocking at Gilman, Ill. The control machine will have a 24-in. by 60-in. panel equipped with 29 track indication lights, 22 levers and 6 call-on push-buttons for the control of 16 electric switch

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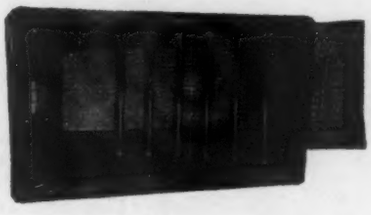
FOR EVERY TYPE OF LOCOMOTIVE BOILER



SECURITY CIRCULATORS are designed for use in any type of steam locomotive, whether coal or oil burning. Installations range from three to nine Circulators each, according to the size of the boiler.

In addition to providing effective support for a 100% brick arch, Security Circulators are so located that they become the most effective evaporating elements in the boiler. They also improve the circulation of water in the side water-legs and over the crown sheet, and lessen honey-combing, flue plugging and cinder cutting.

AMERICAN ARCH COMPANY, INC.

NEW YORK • CHICAGO

SECURITY CIRCULATOR DIVISION

machines, 3 switch locks and 44 signals at a junction and crossing with the Toledo, Peoria & Western. This installation will utilize Type B plug-in relays and switch machine controllers.

The NEW YORK CENTRAL has ordered equipment from the General Railway Signal Company for the installation of an all-relay electric interlocking system at Depew, N. Y. The control machine, to be located at Signal Station 46, will have a 30-in. by 72-in. panel equipped with 45 track and approach indication lights, 7 approach-bell cancellation push-buttons, 3 ammeters and power-off switches, 1 power-off indication light and push-button, 2 maintainer-call push-buttons, a loud-speaker, 21 switch levers, and 19 signal levers for the control of 38 switch machines and 70 signals at Depew interlocking. Type K relays, Type B plug-in relays, Model 5A switch machines, and Type SA searchlight signals will be used in this installation.

Supply Trade

Ken J. Conway has been appointed sales representative in the Chicago office of **Heywood-Wakefield Company.**

Thomas J. Watson, Jr., vice-president of the **International Business Machines Corporation,** has been elected a director to succeed the late **Abraham L. Kellogg.**

K. V. Turner has been appointed assistant sales manager of the **LaPlant-Choate Manufacturing Company,** Cedar Rapids, Iowa.

Lewis W. Metzger, vice-president in charge of operations at the Eddystone, Pa., division of the **Baldwin Locomotive Works,** has been appointed a director to succeed **Charles L. Stillman,** resigned.

The **Davey Compressor Company** has announced the appointment of the **Contractors Machinery Company,** Kansas City, Mo., as a distributor of Davey Compressors.

James L. Newton, manager of the Chicago district office of **Kopp Glass, Inc.,** has been appointed sales manager, with headquarters at the general office at Swissvale, Pa.

Kennametal Inc., Latrobe, Pa., has announced the appointment of **Harry W. Bearfoot** as a representative in the Philadelphia, Pa., area, with headquarters at 3701 North Broad street.

The **Electric Storage Battery Company** has purchased from the War Assets Administration for $1,000,000 a Chicago war plant, which they will convert for manufacturing Exide batteries.

Milton E. Lauer, production planning manager of **Sylvania Electric Products, Inc.,** has been appointed to the newly created position of product manager of the radio tube division.

James C. Younglove, sales manager of the Railroad division, **American Hair & Felt Company,** at Chicago, has retired. He joined the company as sales manager in 1931.

Russell P. Proffitt, Chicago divisional manager of the **Timken Roller Bearing Company,** has been appointed district manager, with headquarters in Washington, D. C. **H. B. Lilley,** development engineer on alloy mechanical tubing, has been appointed district manager of the steel and tube division, with headquarters in Houston, Tex.

William K. Greene, engineer in the designing department of the **American Bridge Company** (a subsidiary of the United States Steel Corporation), with headquarters at New York, has been appointed assistant division engineer of the Chicago district, with headquarters at Chicago, succeeding **T. A. Jordan,** who has retired after 36 years of service with American Bridge.

Marshall M. Smith, vice-president and a director of the **E. W. Bliss Company,** has been elected president, effective after December 1, to succeed **D. S. Harder** who will take office as vice-president in charge of operations of the Ford Motor Company. Mr. Smith will continue to serve as chairman of the board of directors of the England and Paris branches of the company and as director of the Canadian branch.

OBITUARY

Joseph D. Horton, purchasing agent of the Union Spring & Manufacturing Co., New Kensington, Pa., died on October 22. He was associated with the company for 35 years.

L. Lewis Cohen, chairman of the board of directors of the **Union Asbestos & Rubber Company,** died of a heart attack on October 25, at his home in Highland Park, Ill.

Construction

NATIONAL OF MEXICO.—This road plans to build in Monterrey a railroad technical school which will be the largest of its kind in Mexico, according to a report from the American Embassy at Mexico City by the Office of International Trade, Department of Commerce. All equipment, estimated to cost 1,000,000 pesos (peso equals 20.6 cents) is to be imported from the United States.

NEW YORK CENTRAL.—This road and the Cleveland, Cincinnati, Chicago & St. Louis have applied to the Interstate Commerce Commission for authority to construct and operate a 2.5-mile extension to the latter's so-called Saline Valley branch. The extension, to be located in Saline and Williamson counties, Illinois, would serve coal mines located in that area.

UNION PACIFIC.—This road's construction of a $100,000 one-story produce warehouse at Omaha, Neb., began this week, with the work being done by the Metcalfe Construction Company. The building, to be 168 ft. by 180 ft., will be served by a double-tracked siding at the loading dock. Completion is expected by next spring.

Financial

BALTIMORE & OHIO.—*Equipment Trust Certificates.*—This road has sold $7,620,000 of series R equipment trust certificates to Salomon Bros. & Hutzler on the latter's bid of 99.29 per cent of par. The certificates bear an annual interest rate of 1⅞ per cent and are payable in ten equal yearly installments, which represents an interest cost to the B. & O. of 2.01 per cent.

BAMBERGER.—*Acquisition.*—Division 4 of the Interstate Commerce Commission has authorized this road to acquire and operate 0.75 mile of abandoned track formerly operated by the Salt Lake & Utah in Salt Lake City, Utah. The property was purchased by the applicant on July 26 for $100,000 at a receiver's sale. The purchase price will be paid from funds in the applicant's treasury.

CHESAPEAKE & OHIO.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to assume liability for $1,500,000 of equipment trust certificates to finance in part the acquisition of equipment estimated to cost approximately $1,896,717. The equipment includes 7 2-8-4 freight locomotives, each equipped with 21,000-gallon tenders, to be purchased from the Lima Locomotive Works, Inc., and 50 30-ton all-steel cabooses to be acquired from the American Car & Foundry Company. The certificates would be dated December 1 and would mature in 10 equal annual installments of $150,000 each starting December 1, 1947.

CHICAGO NORTH SHORE & MILWAUKEE. —*New Company.*—Federal District Judge Michael L. Igoe, Chicago, set November 1 as the effective date of transfer of the property of the Chicago North Shore & Milwaukee *Railroad* to the new Chicago North Shore & Milwaukee *Railway.* Under the reorganization plan, which was confirmed by him on June 27, bondholders of the old company will share in a proportionate distribution of 500,000 shares of no par value common stock in the new company, and in a cash distribution of $3,500,000. There will be no bonded indebtedness. New officers were scheduled to be elected at the first directors' meeting on November 1. Names of the company's directors were reported in the *Railway Age* of July 6, page 30.

CHICAGO, ROCK ISLAND & PACIFIC.—*Bond Retirement Plan.*—This road, as debtor corporation, filed, on October 28, a petition with the federal district court in Chicago requesting authority to purchase defaulted bonds and notes of the road in the amount of $55 million, or such other amount as the court may determine. The court was requested to authorize the trustees of the road to give notice on or before November 20, requesting tenders of the bonds and to fix December 10 as the deadline for receipt of tenders.

Purchases were suggested at prices not exceeding 20 per cent above the closing market of October 19, and would be limited to the percentages for each issue established by the Interstate Commerce

News Department continued on next left-hand page

. . . the *Elesco* *Forced Circulation* STEAM GENERATOR

- COMPACT
- SIMPLIFIED CONTROL
- AUTOMATIC
- HIGHLY EFFICIENT

Adaptable to diesel-electric locomotives for train heating

ELESCO

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Montreal, Canada, THE SUPERHEATER COMPANY, LTD.

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Commission's modified reorganization plan of January 3, 1944. The petition recommends purchase of $18,133,500 of general 4s of 1988, at an average price of $83; $20,795,500 of first and refunding 4s of 1934, at $51; $8,475,000 of secured 4½s of 1952, at $59; and smaller amounts of Choctaw, Oklahoma & Gulf 5s, Short Line 4½s, Rock Island, Arkansas & Louisiana 4½s and certain notes.

The proposal of the road is offered as a substitute for a plan submitted to the court on September 30 by Aaron Colnon, co-trustee of the company, on which hearings began on November 1. (See *Railway Age* for October 5, page 582.)

DELAWARE, LACKAWANNA & WESTERN.—*Control of Leased Line.*—This road has applied to the Interstate Commerce Commission for authority to acquire control, through stock ownership, of the Passaic & Delaware Extension, which extends 7.5 miles from Bernardsville, N. J., to Gladstone, and which it has operated under lease since 1890. It proposes to purchase at $75 per share 513 shares of the latter's outstanding capital stock, which together with the 327 shares it already owns will give it control of that road.

DELAWARE, LACKAWANNA & WESTERN. —*Merger of Leased Lines.*—Stockholders of this road have approved the proposed merger into the system of the Cayuga & Susquehanna and the Greene, now operated under lease by the Lackawanna. A majority of the Cayuga & Susquehanna's common stock and all the stock of the Greene are owned by the D., L. & W. The outstanding Cayuga stock, under the plan of merger, would be bought at $36 a share. (See the *Railway Age* for September 14, page 454, and September 21, page 498.)

DULUTH, MISSABE & IRON RANGE.—*Refunding.*—Division 4 of the Interstate Commerce Commission has authorized this road to issue $19,200,000 of first mortgage serial bonds, the proceeds to be applied, together with other funds, toward the redemption of $19,800,000 of outstanding first mortgage 3½ per cent bonds, due November 1.

The new bonds will be dated October 1 and will mature serially in principal amounts of $1,200,000, starting October 1, 1947, and ending October 1, 1962. They will bear interest, payable on April 1 and October 1 of each year, at the rate of 1.15 per cent on October 1, 1947, and increasing to 2.5 per cent on October 1, 1962. Subject to commission approval, the bonds were sold at 99.5 to Morgan, Stanley & Company and others, the selling price resulting in an average annual cost to the applicant of 2.295 per cent.

HOBOKEN MANUFACTURERS.—*Reorganization.*—The Hoboken Railroad, Warehouse & Steamship Connecting Company has filed with the Interstate Commerce Commission a petition in this road's reorganization proceedings, asking an "adjudication and finding" that forfeiture by the H.M. of the 99-year lease of June 19, 1906, under which it has operated the petitioner's 9.5 mile line in Hoboken, N. J., and Weehawken, would be compatible with public interest. According to the petitioner, operation of the line by itself "obviously will be more advantageous to the public than its operation by the insolvent debtor." Along with the petition, the warehouse company also filed an application wherein it seeks a commission finding that public convenience and necessity permit H. M.'s abandonment of operation of the line. The filings follow the recent decision by the Supreme Court of the United States which, as noted in *Railway Age*, May 4, page 928, halted Warehouse's undertaking to enforce the forfeiture clause in the lease without first seeking commission approval.

SEABOARD AIR LINE.—*Modification of Leases.*—Division 4 of the Interstate Commerce Commission has authorized this road to modify lease agreements under which the applicant operates the properties of the Tampa Northern, the Brooksville & Inverness, the Charlotte Harbor & Northern and the Prince George & Chesterfield, all of which are its wholly owned subsidiaries.

The commission found that because the leases and securities of the lessors held by the applicant are now pledged under the Seaboard first and general mortgages instead of its predecessor's first and consolidated mortgage, the language in the existing leases does not appropriately accomplish the purposes for which they were originally intended or meet the situation as it presently exists.

According to the commission's report, the applicant contemplates the acquisition of the lines covered by the leases, after which the corporate existence of the lessor companies will be terminated. Pointing out that "such acquisition . . . cannot be effectuated for some time," the commission said that the proposed lease amendments, therefore, are temporary arrangements "believed to be essential to permit the continuance of the rental agreements between the applicant and the respective lessors during the interim."

Abandonments

DENVER & RIO GRANDE WESTERN.—This road has applied to the Interstate Commerce Commission for authority to abandon a 4.1-mile portion of its so-called Crested Butte branch from Crested Butte, Colo., to Anthracite.

DELAWARE, LACKAWANNA & WESTERN.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon operation of and the Hoboken Ferry Company to abandon a ferry line extending from Hoboken, N. J., to West 23rd street, New York, approximately 1.33 miles. In approving this transaction, the commission imposed the usual employee-protection conditions.

In a summation of its findings, the commission observed, in part, that the ferry line has been operated at "substantial losses" since 1942 and that it cannot be operated at a profit even if used to 100 per cent of its vehicular capacity. It said that the D., L. & W. will save from $150,000 to $200,000 annually if the ferry is abandoned and if, as the road expects, "enough of the present 23rd street vehicular and passenger traffic to produce $224,000 revenues is transferred to the Christopher street ferry," also operated by the D., L. & W.

MISSISSIPPI CENTRAL.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon a portion of a line extending from a point 2.5 miles south of Hattiesburg, Miss., to Camp Shelby, approximately 7 miles.

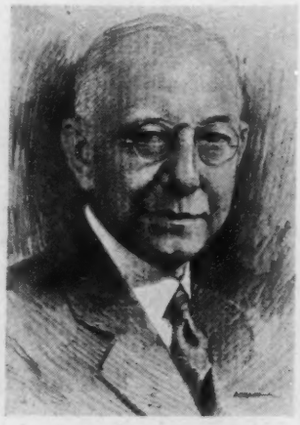
NORFOLK & WESTERN.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon a branch line extending from a point near Narrows, Va., to Bastian, approximately 29.7 miles. In approving this transaction, the commission prescribed the usual employee-protection conditions.

OREGON-WASHINGTON RAILROAD & NAVIGATION.—This road has applied to the Interstate Commerce Commission for authority to abandon a portion of a branch from Alto, Wash., to Relief, 5.3 miles. The applicant also asked the commission to authorize the Union Pacific to abandon operation of the same segment.

Railway Officers

EXECUTIVE

Robert T. Rossell, whose retirement from the presidency of the Bessemer & Lake Erie on October 1 was reported in the *Railway Age* of October 5, was born at Pittsburgh, Pa., on September 28, 1876. Mr. Rossell received his education in the public and high schools of Pittsburgh and entered railroad service on June 1, 1901, as secretary to the president of the Bessemer & Lake Erie and the Union Railroad. In April, 1919, he was appointed vice-president of the Union and in December, 1922, he became vice-president of the Bessemer & Lake Erie. Mr. Rossell was elected to the presidency of the Bessemer & Lake Erie and the Union in March, 1928, and also served as president of the



Robert T. Rossell

News Department continued on next left-hand page

HSGI *helps move mountains over the* BESSEMER *and* LAKE ERIE

If all the iron ore, coal, and limestone carried over the double track Bessemer route during one year were heaped in one pile, it would make a respectable-sized mountain. Such tonnage gives this road greater importance than its modest mileage would indicate, for it is a major feed line from the Great Lakes to America's greatest steel center. For at least one good reason, Bessemer and Lake Erie has used Hunt-Spiller Gun Iron vital locomotive parts for more than 35 years. It knows, as do 75 other important Class I roads, that HSGI is unequaled for quality and durability.

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HSGI
AIR FURNACE PROCESS

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Valve Bushings	Floating Rod Bushings	Cylinder Snap Rings
Valve Packing Rings	Light Weight Valves	Valve Rings—All Shapes
Valve Bull Rings	Cylinder Liners and Pistons for Diesel Service	

Etna & Montrose. He retired from the presidencies of the Union, the Youngstown & Northern, and the Etna & Montrose last August 1, but continued as president of the Bessemer & Lake Erie until October 1.

John A. Appleton, whose appointment as vice-president, Central region of the Pennsylvania at Pittsburgh, Pa., was announced in the *Railway Age* of October 19, was born on December 24, 1891, at New York, and was graduated from Yale university (B. A., 1914). Entering railroad service as yard clerk on the Pennsylvania in September, 1915, he joined the U. S. Army, Corps of Engineers, in September, 1917, and attained the rank of captain, Transportation Corps, before his discharge in June, 1919. Mr. Appleton returned to the employ of the Pennsylvanna as terminal supervisor at Greenville, N. J., after his release from army service, and subsequently served as assistant freight trainmaster of the New York division, trainmaster of the Cumberland Valley division and freight trainmaster of the Philadelphia terminal division, becoming superintendent of the Monongahela division in 1924. He was transferred to the Erie and Ashtabula division two years later, to the Columbus division in 1927, and to the Pittsburgh division in 1928. Mr. Appleton became acting general superintendent, Lake division, at Cleveland, Ohio, in 1929, being appointed general superintendent, Northwestern division, Chicago, later in the same year. He was transferred to the Lake division in 1931 and to the Eastern Pennsylvania division at Harrisburg, Pa., in 1933. He was promoted to general manager, New York zone in 1935 and served in that capacity until he

John A. Appleton

was furloughed for war service in the Army Transportation Corps in World War II. Upon his discharge from the Army, Mr. Appleton returned to the Pennsylvania as assistant vice-president—operation, the post he was holding at the time of his recent promotion.

L. L. Morton, whose appointment as vice-president in charge of operations of the Louisville & Nashville, effective on November 1, was reported in the *Railway Age* of October 26, was born on April 2, 1884, at Mt. Eden, Ky., and entered railroad service in 1906 in the engineering department of the Atlanta, Birmingham & Atlantic (now part of the Atlantic Coast Line). A graduate of engineering at Centre College, Mr. Morton served as assistant engineer of the Kansas City Southern at Texarkana, Tex., from 1909 to 1912. In the latter year he joined the Louisville & Nashville as assistant engineer in the

L. L. Morton

chief engineer's office, which position he held until 1917. He entered military service during World War I, attaining the rank of lieutenant colonel. Upon his return to L. & N. service, he was made special engineer at Louisville, Ky., which position he held until 1928. At that time he was advanced to division superintendent at New Orleans, La., and in 1931, following consolidation of divisions, he was transferred to Mobile, Ala., as superintendent of the Montgomery and New Orleans division. In the latter part of 1931 he was appointed assistant general manager, and in 1941 he was made also assistant vice-president, which positions he held until his current promotion.

Frank I. Snyder, whose election to the presidency of the Bessemer & Lake Erie at Pittsburgh, Pa., was reported in the *Railway Age* of October 5, was born at Greenville, Pa., on December 12, 1883. Mr. Snyder entered railroad service in 1903 as stenographer to assistant trainmaster of

Frank I. Snyder

the Pennsylvania at Pittsburgh, in which capacity he served until 1904. From 1904 to 1905, he was clerk in the traffic department of the Carnegie Steel Company at Pittsburgh. In 1905 Mr. Snyder was appointed clerk to general superintendent of passenger transportation, Pennsylvania Lines West of Pittsburgh, while from 1906 to 1927 he served the Bessemer & Lake Erie successively as secretary, chief clerk, office assistant and assistant to vice-president and general manager, assistant general manager and general manager at Pittsburgh. He was office assistant to federal manager of the Bessemer & Lake Erie from 1918 to 1920, during federal control. In 1927 Mr. Snyder was appointed vice-president and general manager of the Bessemer & Lake Erie at Pittsburgh, which position he held until his recent election to the presidency of that road.

Jerome H. Doran has resigned as a vice-president of the Hudson & Manhattan to re-enter the private practice of law.

M. J. McNamara, transportation assistant of the St. Louis Southwestern, with headquarters at St. Louis, Mo., has been promoted to assistant to the chief executive officer, with the same headquarters.

FINANCIAL, LEGAL AND ACCOUNTING

W. H. LeValley, whose promotion to auditor freight accounts of the New York Central, with headquarters at Detroit, Mich., was reported in the *Railway Age* of October 12, was born on December 16, 1891, at Ridgeway, Ohio, and began his railroad career in 1909 as a clerk with the Cleveland, Cincinnati, Chicago & St. Louis (part of the New York Central System). In 1913 Mr. LeValley was made cashier at Middletown, Ohio, and in 1917 he was ap-

W. H. LeValley

pointed agent at Marysville, Ohio. The following year he was promoted to special accountant at Cleveland. From 1924 to 1937 he served as district station accountant, successively at Indianapolis, Ind., Weehawken, N. J., and Cleveland. In 1941 he was further advanced to auditor station accounts and overcharge claims at New York, and in 1945 was promoted to assistant auditor freight accounts at Detroit, which position he held until his recent promotion.

Bayard H. Roberts, assistant general solicitor of the Pennsylvania, with headquarters at Philadelphia, Pa., has been appointed assistant secretary and assistant transfer agent, with the same headquarters.

H. L. **Heinzeroth,** assistant to the secretary, has been appointed assistant secretary, with headquarters as before at Philadelphia.

Sumner S. Clark has been appointed attorney of the Maine Central and the Portland Terminal, with headquarters at Portland, Me.

OPERATING

R. J. Barnes, assistant trainmaster, Buffalo division of the New York Central, has been promoted to trainmaster of that division, with headquarters as before at Buffalo, N. Y.

C. B. Petticrew, whose promotion to superintendent of transportation of the St. Louis Southwestern, with headquarters at Tyler, Tex., was reported in the *Railway Age* of October 26, was born on November 21, 1887, at Franklin, Ohio, and was graduated from Purdue University in 1909. Mr. Petticrew began his railroad career in 1905, while attending college, as a rodman on the Cleveland, Cincinnati, Chicago & St. Louis (now part of the New York Central System). From 1909 to 1916 he served with

C. B. Petticrew

the Missouri Pacific, successively, as rodman, instrumentman, roadmaster and engineer. In 1916 he became district engineer of the Missouri, Kansas & Texas (now the M-K-T), and in 1919 he was made trainmaster. He joined the Cotton Belt in 1920 as division engineer, and in 1923 was advanced to superintendent at Pine Bluff, Ark. He held the latter position until his current promotion.

R. D. Maloney, whose promotion to superintendent of the New York, Chicago & St. Louis, with headquarters at Muncie, Ind., was reported in the *Railway Age* of October 26, was born on August 29, 1891, at Cincinnati, Ohio, and entered railroad service in 1910 with the Cleveland, Cincinnati, Chicago & St. Louis (part of the New York Central System) as a yard clerk. Mr. Maloney joined the Nickel Plate in 1917 as a yard clerk at Stony Island (Chicago), Ill., and later in the same year was made yardmaster. He held this position until 1920, when he was advanced to general yardmaster. In 1931 he was transferred to Bellevue, Ohio, where he remained until 1934, when he was promoted to trainmaster, with jurisdiction over the territory between Toledo, Ohio, and Frankfort, Ind. In 1936 he was transferred to Conneaut, Ohio, and in 1941 he was made assistant superintendent of the Lake Erie & Western district at Muncie, which position he held until his current promotion.

Kirby M. Post, whose promotion to chief operating officer of the St. Louis Southwestern, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of October 26, was born at Gatesville, Tex., on April 10, 1886, and was educated

Kirby M. Post

in the primary and secondary schools of that city. He initiated his railroad career in 1904 as a messenger for the Cotton Belt in his home town. From this point he served successively as clerk, telegrapher, station agent, train dispatcher and chief dispatcher until 1920 when he became assistant superintendent of the St. Louis-Southwestern of Texas. In 1921 he became superintendent of the Texas division, in which position he served until 1929, when he was appointed assistant to the president of the railroad. In 1930 Mr. Post was promoted to vice-president and general superintendent, with headquarters at Tyler, Tex., which position he held at the time of his promotion to chief operating officer.

W. V. Keith, assistant superintendent of the St. Louis Southwestern, with headquarters at Pine Bluff, Ark., has been promoted to assistant general superintendent, with headquarters at Tyler, Tex.

TRAFFIC

The Chicago, Milwaukee, St. Paul & Pacific has opened a traffic office at Indianapolis, Ind., with **W. G. Lacey,** formerly traveling freight and passenger agent at Cincinnati, Ohio, as general agent.

J. J. Van Burk, assistant general freight agent of the Chicago & Eastern Illinois, with headquarters at Chicago, has been appointed general freight agent, with headquarters as before. He is succeeded as assistant general freight agent by **M. A. Smith.**

H. B. Meinhardt has been appointed general perishable freight agent of the Chicago, Burlington & Quincy, with headquarters at Chicago. **H. R. Hudgens, Jr.,** has been appointed assistant general perishable freight agent, with the same headquarters.

H. L. Schaeffer, general passenger traffic manager of the Missouri Pacific, has been promoted to general freight traffic manager, with headquarters as before at St. Louis, Mo. He succeeds **J. R. Staley,** whose resignation to accept a position with the Quaker Oats Company was reported in the *Railway Age* of October 12. Mr. Schaeffer is succeeded by **I. G. Miller,** general passenger agent at St. Louis, who in turn is succeeded by **J. B. Reynolds,** assistant general passtnger agent, with headquarters at Little Rock, Ark. Mr. Reynolds is succeeded by **H. R. Kastman.**

Charles Loos Ewing, whose retirement as chief freight traffic officer of the Central of New Jersey was reported in the *Railway Age* of October 5, was born at Pittsburgh, Pa., on December 1, 1877. Mr. Ewing entered railroad service in 1894 as freight traffic clerk of the Pittsburgh & Lake Erie, at Pittsburgh, in which capacity he served until 1898. From 1898 to 1899 he was apportionment clerk for the Railway Clear-

Charles Loos Ewing

ing House at Buffalo, N. Y., then becoming department manager of the Snyder Banana Company and United Fruit Company, Bocos del Toro, Republic of Colombia. In 1902 Mr. Ewing went with the Central of New Jersey as rate and percentage clerk in the freight traffic department at New York, becoming assistant chief rate clerk in 1905, Chief rate clerk in 1906 and chief of the tariff bureau in 1909. He held the latter position until 1915, when he became assistant general freight agent of the Central of New Jersey. In 1924 Mr. Ewing was appointed general freight agent and he became freight traffic manager in 1926, holding that position until 1935, when he was appointed general freight traffic manager. From 1939 to 1943 Mr. Ewing was vice-president in charge of freight traffic, becoming chief freight traffic officer in 1943.

Bernard Joseph King, whose promotion to assistant freight traffic manager of the Seaboard Air Line at Atlanta, Ga., was reported in the *Railway Age* of September 28, was born on March 20, 1901, at Columbus, Ga. After attending high school Mr. King entered railroad service on June 20, 1917, with the Seaboard Air Line as

News Department continued on second left-hand page

Based on their previous good experience with G-R-S CTC, the Delaware and Hudson installed CTC on the busy 6.1 miles of double track between Albany and Watervliet. Here, as many as 339 train and locomotive movements are made each day!

With the installation of G-R-S CTC, four interlockings were consolidated into one control office—with

CONTROLLED

This CTC machine replaces four interlockings at Albany.

resultant savings in operating and maintenance expense. Centralization of control of the entire territory expedited the movement of through trains and local freight, making for a substantial increase in track capacity.

True the biggest benefits of CTC usually come on long stretches of track; but frequently short sections, with their own peculiar operating problems can use CTC to effect large savings in train time and operating expense. Like the D & H, many railroads are finding that CTC is an extremely versatile economic tool.

Railroads all over the country are using CTC to speed schedules, increase track capacity, and defer new construction. If any of these advantages of CTC can benefit your railroad, why not get in touch with G-R-S? Simply call our nearest district office.

339 TRAIN MOVES A DAY
BY ONE CTC MACHINE

Another longer installation of G-R-S CTC on the D & H so increased track capacity that it allowed them to remove 23.65 miles of track.

General Railway Signal Company

ROCHESTER 2, N. Y. • NEW YORK 17 • CHICAGO 3 ST. LOUIS 1

stenographer in the office of the commercial agent at Columbus. He occupied various clerical and stenographic positions until August 16, 1922, when he was transferred to Norfolk, Va., where he was employed as stenographer in the office of the first vice-

Bernard Joseph King

president. On November 1, 1922, he was appointed secretary to first vice-president and on November 16, 1925, he was advanced to assistant chief clerk to first vice-president. On October 16, 1930, he became chief cleark to first vice-president, later serving as chief clerk to chief traffic officer. Subsequenlly Mr. King served as district freight agent at Greenville, S. C., division freight agent at Atlanta, division freight agent at Jacksonville, Fla., and assistant general freight agent at Miami, Fla., the position he held until September 16, when he was promoted to assistant freight traffic manager at Atlanta.

Edward I. Reininger has been appointed district passenger agent of the Illinois Central, with headquarters at St. Louis, Mo., succeeding **E. W. Betts,** who has retired. **John T. McCue** has been appointed district passenger agent at Cincinnati, Ohio, succeeding **F. R. Fisher,** who has also retired.

C. F. Tall has been appointed assistant general freight agent of the New York, Chicago & St. Louis, with headquarters at St. Louis, Mo., succeeding **W. W. Brown,** whose promotion to assistant freight traffic manager at St. Louis was reported in the *Railway Age* of October 19. The position of general freight agent has been abolished.

MECHANICAL

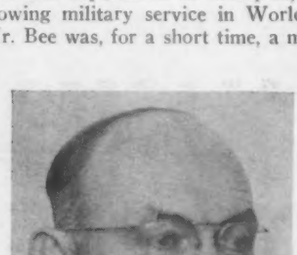
W. W. Walker has been appointed master mechanic of the Atchison, Topeka & Santa Fe, with headquarters at Dodge City, Kan., succeeding **G. C. Kistner,** who has been transferred to Clovis, N. M. Mr. Kistner succeeds **L. B. Johnson,** who has been transferred to Wellington, Kan., where he succeeds **W. S. Tasker,** who has retired.

ENGINEERING & SIGNALING

F. W. Furnas, assistant signal engineer of the Elgin, Joliet & Eastern, at Joliet, Ill., has been appointed signal engineer, with the same headquarters, succeeding **F. C. Stuart,** who has retired after more than 32 years of continuous service. **W. E. Elliott,** assistant signal supervisor at Joliet, has been appointed assistant signal engineer, with the same headquarters, succeeding Mr. Furnas. **F. J. Halbkat,** draftsman, has been appointed communications engineer, a newly-created position, with headquarters as before at Joliet.

SPECIAL

W. D. Bee, whose promotion to chief special agent of the Illinois Central, with headquarters at Chicago, was reported in the *Railway Age* of October 19, began his railroad career with the I. C. in 1916 in the mechanical department at Memphis, Tenn. Following military service in World War I. Mr. Bee was, for a short time, a member



W. D. Bee

of the Memphis city police force. From 1921 to 1930 he served as a patrolman on the I. C., and in the latter year was made assistant special agent at Jackson, Miss. In 1936 he was transferred to Vicksburg, Miss., where he remained until 1939, when he was made special agent at New Orleans, La. He held the latter position until his current promotion.

PURCHASES AND STORES

F. J. McMahon, general storekeeper of the New York Central at Collinwood, Ohio, has been appointed general supervisor of stores, with the same headquarters, effective September 1. It was incorrectly announced in the *Railway Age* of August 31, that Mr. McMahon was appointed *assistant* general supervisor of stores. Mr. McMahon was born at Milwaukee, Wis., May 20, 1883, and entered railroad service in December, 1906, as clerk for the New York Central at Collinwood, Ohio. In July, 1908, he was appointed storekeeper at Alliance, Ohio, transferring to Air Line Junction, Ohio, in January, 1909. From March, 1910, to April, 1912, Mr. McMahon served as assistant storekeeper at Collinwood, becoming storekeeper at Gibson, Ind., on the latter date. He was traveling storekeeper at Collinwood from April, 1915, to September, 1916, when he became district storekeeper there. From June, 1922, to January, 1926, Mr. McMahon was assistant general storekeeper at Collinwood and he then served as general storekeeper there until last September 1, when he became general supervisor of stores.

Earl F. Cathers has been appointed chief engineer of the Alabama, Tennessee & Northern, with headquarters at Mobile, Ala.

OBITUARY

Evan F. Jones, who retired in 1939 as master mechanic of the Chicago & Western Indiana, died at his home in Chicago on October 26.

W. A. Fauntleroy, assistant general freight agent of the Western Pacific, with headquarters at San Francisco, Cal., died suddenly on October 27.

Samuel Moorehead Russell, former vice-president and receiver of the Toledo, Peoria & Western, died in a hospital in Lexington, Ky., on October 28, at the age of 74.

Brigadier General Leonard P. Ayres, economic adviser to the Chesapeake & Ohio, the New York, Chicago & St. Louis and the Pere Marquette, died of a heart attack at his home in Cleveland, Ohio, on October 29, at the age of 67. Mr. Ayres was also a director of the Chesapeake & Ohio and Alleghany Corporation and had been vice-president of the Cleveland Trust Company since 1920.

Shirley L. Porter, general auditor of the Chicago, Burlington & Quincy, with headquarters at Chicago, died on October 26 at the MacNeal Memorial Hospital, Berwyn, Ill. Mr. Porter was born on December 26, 1879, at Erie, Ill., and began his railroad career in 1899 as a clerk in the freight office of the C. B. Q. at Chicago. He held various clerical positions until 1917, when he was promoted to assistant auditor of expenditures. In 1920 he was made auditor of expenditures, and the following year became auditor of freight accounts. In 1927 Mr. Porter was advanced to auditor, controller's staff, and in 1934 he was further promoted to assistant general auditor. He was promoted to general auditor on November 1, 1936.

Edward Landon Setzer, assistant freight traffic manager of the Seaboard Air Line at Atlanta, Ga., whose death on August 25, was noted in the *Railway Age* of September 28, was born at Lincolnton, N. C. Mr. Setzer attended Lincolnton high school and entered railroad service on May 18, 1918, with the Carolina & Northwestern as a clerk at Lincolnton, later advancing to cashier and chief clerk. On December 1, 1924, Mr. Setzer was appointed traveling freight agent of the Old Dominion Steamship Co., Atlanta, Ga., remaining in that position until September 1, 1927, when he entered the service of the Seaboard Air Line as city freight agent at Atlanta. He advanced to commercial agent on June 1, 1935, and on October 16, 1939, he was promoted to assistant freight traffic manager at Atlanta, which position he held at the time of his death.

Operating Revenues and Operating Expenses of Class I Steam Railways

Compiled from 129 monthly reports of revenues and expenses representing 133 Class I steam railways

(Switching and Terminal Companies Not Included)

FOR THE MONTH OF AUGUST, 1946 AND 1945

Item	United States		Eastern District		Southern District		Western District	
	1946	1945	1946	1945	1946	1945	1946	1945
Miles of road operated at close of month	227,712	228,268	55,850	56,004	43,275	43,333	128,589	128,931
Revenues:								
Freight	$546,129,592	$547,271,050	$215,849,166	$192,782,599	$105,649,142	$95,000,861	$224,631,284	$259,487,570
Passenger	112,114,681	153,254,144	53,553,687	62,852,088	16,799,666	27,917,686	41,761,328	62,484,370
Mail	10,364,502	10,330,447	3,764,531	3,637,286	1,752,753	1,732,531	4,847,218	4,960,630
Express	7,797,627	10,946,824	246,951	2,891,581	1,213,387	1,296,551	6,337,289	6,758,692
All other operating revenues	33,817,703	33,052,991	15,307,939	13,953,222	4,175,536	4,450,901	14,334,228	14,648,868
Railway operating revenues	710,224,105	754,855,456	288,722,274	276,116,776	129,590,484	130,398,550	291,911,347	348,340,130
Expenses:								
Maintenance of way and structures	102,875,222	117,049,119	39,385,100	41,549,387	19,941,521	20,649,969	43,548,601	54,849,763
Depreciation	10,048,765	9,896,462	4,327,023	4,328,036	1,651,269	1,581,671	4,070,473	3,986,755
Retirements	1,532,866	1,357,387	265,684	213,755	203,895	178,372	1,063,287	965,260
Deferred maintenance	*609,666	34,305	*130,290	38,425	*9,143		*470,233	*4,120
Amortization of defense projects	2,125	1,959,926	*37,409	665,495	18,060	394,492	21,474	899,939
Equalization	*1,277,335	*1,782,266	*1,262,216	*1,589,606	*22,544	*41,348	7,425	*151,312
All other	93,178,467	105,583,305	36,222,308	37,893,282	18,099,984	18,536,782	38,856,175	49,153,241
Maintenance of equipment	126,691,812	139,701,940	55,280,086	56,174,260	23,199,513	26,684,037	48,212,213	56,843,643
Depreciation	18,428,396	18,143,863	7,727,347	7,668,236	3,701,779	3,600,620	6,999,270	6,875,007
Retirements	*10,461	*5,313	*3,210	*5,966	*212	*1,991	*7,039	2,644
Deferred maintenance and major repairs	*352,930	*118,293	*16,741	*16,450	*78,840		*257,349	*101,843
Amortization of defense projects	971,024	18,106,014	421,369	6,149,269	134,248	4,326,619	415,407	7,630,126
Equalization	*143,425	*161,401	*848	*13,579	*140,347	*147,696	*2,230	*126
All other	107,799,208	103,737,070	47,152,169	42,392,750	19,582,885	18,906,485	41,064,154	42,437,835
Traffic	13,899,450	11,864,177	5,211,667	4,254,245	2,579,969	2,285,350	6,107,814	5,324,582
Transportation—Rail line	281,654,498	250,410,940	123,697,244	105,779,129	47,882,103	41,518,158	110,075,151	103,113,653
Transportation—Water line								
Miscellaneous operations	11,901,919	10,635,335	4,288,827	3,811,660	1,458,593	1,591,479	6,154,499	5,232,196
General	18,869,488	17,398,007	7,439,705	7,069,833	3,761,388	3,448,401	7,668,395	6,879,773
Railway operating expenses	555,892,389	547,059,518	235,302,629	218,638,514	98,823,087	96,177,394	221,766,673	232,243,610
Net revenue from railway operations	154,331,716	207,795,938	53,419,645	57,478,262	30,767,397	34,221,156	70,144,674	116,096,520
Railway tax accruals	58,334,295	105,832,320	19,236,458	23,721,146	14,691,374	19,107,840	24,406,463	63,003,334
Pay-roll taxes	21,983,470	20,053,969	9,380,740	8,135,496	3,966,263	3,441,027	8,636,467	8,477,446
Federal income taxes	13,841,670	60,555,020	823,136	5,116,274	6,293,217	10,811,342	6,725,317	44,627,404
All other taxes	22,509,155	25,223,331	9,032,582	10,469,376	4,431,894	4,855,471	9,044,679	9,898,484
Railway operating income	95,997,421	101,963,618	34,183,187	33,757,116	16,076,023	15,113,316	45,738,211	53,093,186
Equipment rents—Dr. balance	11,035,838	10,766,141	4,879,340	2,971,605	*990,760	*1,126,976	7,147,258	8,921,512
Joint facility rent—Dr. balance	3,268,331	3,700,594	1,690,611	1,841,411	380,700	423,589	1,197,020	1,435,594
Net railway operating income	81,693,252	87,496,883	27,613,236	28,944,100	16,686,083	15,816,703	37,393,933	42,736,080
Ratio of expenses to revenues (per cent)	78.3	72.5	81.5	79.2	76.3	73.8	76.0	66.7

FOR EIGHT MONTHS ENDED WITH AUGUST, 1946 AND 1945

Miles of road operated at close of month	227,752	228,286	55,921	56,007	43,284	43,333	128,547	128,946
Revenues:								
Freight	$3,687,324,120	$4,684,633,548	$1,408,521,881	$1,721,170,846	$743,424,351	880,628,171	$1,535,377,888	$2,082,834,531
Passenger	896,236,353	1,123,040,242	403,998,348	462,567,139	146,261,679	214,352,626	345,976,326	446,120,477
Mail	82,641,124	83,818,305	29,328,979	28,441,266	14,265,263	14,661,685	39,046,882	40,715,354
Express	58,012,473	105,316,603	3,727,494	30,588,525	9,298,279	14,954,378	44,986,700	59,773,700
All other operating revenues	237,357,802	251,067,883	109,920,932	109,729,318	31,060,527	34,650,762	96,376,343	106,687,803
Railway operating revenues	†4,961,571,872	†6,247,876,581	1,955,497,634	2,352,497,094	944,310,099	1,159,247,622	2,061,764,139	2,736,131,865
Expenses:								
Maintenance of way and structures	769,133,272	859,962,373	278,575,592	310,125,982	156,509,491	153,396,566	334,048,189	396,439,825
Depreciation	80,134,136	78,071,839	34,721,254	34,177,611	12,955,548	12,497,056	32,457,334	31,397,172
Retirements	5,841,400	7,151,012	1,184,536	1,289,608	812,304	1,026,848	3,844,560	4,834,556
Deferred maintenance	*3,593,112	*2,468,455	*805,581	*698,746	309,644		*3,097,175	*1,769,709
Amortization of defense projects	191,838	17,194,368	48,673	5,223,952	83,682	3,006,792	59,483	8,963,624
Equalization	11,579,605	13,561,720	5,139,319	4,842,628	3,320,641	5,521,244	3,119,645	3,197,848
All other	674,979,405	746,451,889	238,287,391	265,290,929	139,027,672	131,344,626	297,664,342	349,816,334
Maintenance of equipment	971,234,952	1,101,836,857	411,875,578	447,347,828	178,054,557	210,461,200	381,304,717	444,027,829
Depreciation	147,308,519	143,614,391	62,142,810	60,658,060	29,437,492	28,707,367	55,728,217	54,248,964
Retirements	*267,364	*61,345	*93,407	*70,848	*82,027	*57,079	*91,930	66,582
Deferred maintenance and major repairs	*2,392,878	*1,071,032	*189,518	*34,280	*245,624		*1,957,736	*1,036,752
Amortization of defense projects	5,653,958	140,895,871	2,458,170	47,268,796	798,716	34,063,528	2,397,072	59,563,547
Equalization	1,029,396	128,979	10,649	*17,368	948,323	*6,694	70,424	153,041
All other	819,903,321	818,329,993	347,546,974	339,543,468	147,197,677	147,734,078	325,158,670	331,032,447
Traffic	109,487,406	94,459,281	40,088,087	33,883,858	20,455,626	17,803,422	48,943,693	42,772,001
Transportation—Rail line	2,093,488,298	2,017,598,178	913,521,333	889,289,014	364,442,791	340,238,581	815,524,174	788,070,583
Transportation—Water line		1,219						1,219
Miscellaneous operations	84,923,814	78,960,651	32,579,149	28,831,770	11,481,530	12,285,961	40,863,135	37,842,920
General	155,151,604	137,658,644	61,721,528	55,701,090	30,581,728	26,656,801	62,848,348	55,300,753
Railway operating expenses	4,183,419,346	4,290,477,203	1,738,361,367	1,765,179,542	761,525,723	760,842,531	1,683,532,256	1,764,455,130
Net revenue from railway operations	778,152,526	1,957,399,378	217,136,267	587,317,552	182,784,376	398,405,091	378,231,883	971,676,735
Railway tax accruals	380,488,367	1,099,228,647	125,196,455	265,179,359	96,042,420	248,458,881	159,249,492	585,590,407
Pay-roll taxes	168,740,656	155,885,746	70,312,926	64,765,425	30,630,483	26,955,558	67,797,247	64,164,763
Federal income taxes	38,343,704	740,913,274	*15,235,181	114,556,780	30,774,409	181,487,513	22,804,476	444,868,981
All other taxes	173,404,007	202,429,627	70,118,710	85,857,154	34,637,528	40,015,810	68,647,769	76,556,663
Railway operating income	397,664,159	858,170,731	91,939,812	322,138,193	86,741,956	149,946,210	218,982,391	386,086,328
Equipment rents—Dr. balance	73,272,992	95,125,984	32,346,579	42,778,797	*2,529,407	*575,499	43,455,820	52,922,686
Joint facility rent—Dr. balance	25,989,711	28,031,880	13,417,233	14,041,073	3,095,136	3,077,504	9,477,342	10,913,303
Net railway operating income	298,401,456	735,012,867	46,176,000	265,318,323	86,176,227	147,444,205	166,049,229	322,250,339
Ratio of expenses to revenues (per cent)	84.3	68.7	88.9	75.0	80.6	65.6	81.7	64.5

* Decrease, deficit, or other reverse item.

† Railway operating revenues are after deduction of $2,177,713 for the eight months ended with August 1946 and $32,319,601 for the eight months ended with August 1945 to create a reserve for land grant deductions in dispute.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

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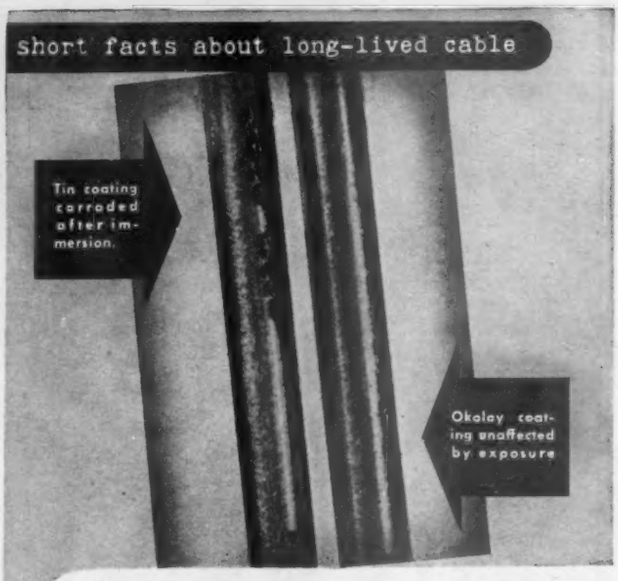

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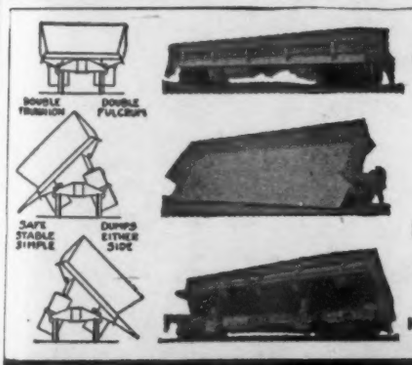

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